RAF COLLEGE CRANWELL
“College 100 Memories”

A Summary of College Items - Chapter 4
College Training - 1920 - 2020

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Prologue

If ever you are required to research something on the heritage of the RAF College - it could be looking up details of a relative who might have been trained at the College, or it could be a more complex review of specific trends throughout its 100 year history - inevitably you will be encouraged to explore the Library's holding of College Journals.

In addition to many other records held within the College and other, third party archives, these journals contain a wealth of information on the milestones, the events and the thinking that underpinned College operations. They are essential reading for anyone who wishes to gain an understanding of how the College evolved and took on the challenges that confronted the world's oldest air training academy throughout its marvellous history.

As its contribution to "College 100" - the celebration of 100 years of officer training at the RAF College - the Cranwellian Historical Society created a suite of albums intended to capture RAF Cranwell's heritage, one album for each year of the College's existence and containing authentic extracts from the College Journals.

One of six chapters that portray 100 selected topics - 'memories' per se - this album draws on chronological Journal extracts in an attempt to summarise life at the College throughout its history, from a variety of perspectives. They are extracts of the original articles in the Journals and so their accuracy is dependent on the authors of the day; the dates in each slide title indicate each article's date of origin.

We hope "College 100 Memories" gives you an enjoyable insight into life at the College between 1920 and 2010. Happy reading.

Memories that Symbolise College Training in 100 Years

To start any specific article:

1. **Click on the slide number shown in red on this page;**
2. **To return to this contents page, click on 'Return to Contents List' at the bottom of each slide.**

Spring 1925 - Commandant's Report

POSTINGS.

THE under-mentioned Pilot Officers are all posted with effect from December, 1924, on appointment to permanent commissions from R.A.F. (Cadet) College, Cranwell:—

A. H. W. J. Cocks	To No. 7 Squadron, Bircham Newton.
G. B. S. Beardsworth	To No. 13 Squadron, Andover.
J. H. McM. Campbell...	To No. 56 Squadron, Biggin Hill.
N. S. Allenson	To No. 13 Squadron, Andover.
S. H. Hardy	To No. 100 Squadron, Spittlegate.
G. R. Beamish	To No. 100 Squadron, Spittlegate.
G. W. Hayes	To No. 100 Squadron, Spittlegate.
S. H. V. Harris	To No. 25 Squadron, Hawkinge.
J. M. Scott	To No. 56 Squadron, Biggin Hill.
A. H. Montgomery	To No. 32 Squadron, Kenley.
Earl of Bandon...	To No. 4 Squadron, Farnborough.
J. G. Franks	To No. 56 Squadron, Biggin Hill.
J. R. Addams	To No. 56 Squadron, Biggin Hill.
R. J. A. Ford	To No. 25 Squadron, Hawkinge.
M. E. de L. Hayes	To No. 39 Squadron, Spittlegate.
P. McK. Terry	To No. 7 Squadron, Bircham Newton.
G. F. G. Cox	To No. 39 Squadron, Spittlegate.

EXTRACTS FROM COMMANDANT'S REPORT FOR INSPECTION OF THE COLLEGE, DECEMBER, 1924, BY SIR PHILIP GAME.

THERE are 110 Flight-Cadets under training:—

(*a*) IV Term	22
(*b*) III Term	28
(*c*) II Term	30
(*d*) I Term	30

The flying times during the last term are:—

Observers' training	64 hrs. 40 mins.
Avro dual	329 hrs. 35 mins.
Avro solo	277 hrs. 35 mins.
Bristol Fighter dual	79 hrs. 40 mins.
Bristol Fighter solo	187 hrs. 0 mins.
D.H. 9a. dual	12 hrs. 25 mins.
D.H. 9a. solo	35 hrs. 30 mins.
Total	986 hrs. 25 mins.

Again this term no accident has taken place through bad weather, which is largely due to the co-operation of the Meteorological Office and the Wireless Station with the Cadet College.

Educational Training.—In Workshops, the passing-out term has been very satisfactory and consistent.

In Aeronautical Science, the sub-division of Physics, in addition to Mathematics and Mechanics, into an elementary and advanced class seems to have satisfied a need, and works well. The general attainments of the last entry of Cadets appear to be lower than usual.

The IV Term have done good work in English, and some of them have learned to write in first class style. The exercise on an R.A.F. Campaign, which they have to carry out as part of their final examination, has been tackled in a way that shows wide reading and creditable judgment. They were aided in this exercise by the loan of a film from the Air Ministry, illustrating Lord Allenby's campaign in Palestine.

The III Term have made a good start in their second year's work.

The standard of English in other terms, particularly in I Term, is still below the standard required in an Officer.

There have been debates on alternate Friday evenings this term, and there has been no trouble in getting Cadets to speak. On other Fridays external lectures have been given on interesting topics.

Many contributions have been sent to the Magazine from Cadets, and 150 books have been purchased for the Library, which is now used more than ever for private reading and study.

The discipline has been good, and no cases of disobedience of flying instructions have been reported this term. The Under-Officers and N.C.Os. have performed their duties in a most satisfactory manner. The breaking of regulations in regard to motor-cycling is still prevalent, and during the term it has been necessary to take severe disciplinary action.

The standard of physical training has greatly improved, partly due to the arrangement this term of compulsory organized exercises on Monday and Friday afternoons. The agility work has shown a marked improvement. The average gain in the physical improvement of the term passing out is:—

Height: 1·05″.
Weight: 9·3 lb.
Chest measurement, normal: 1·04″.
Chest measurement, expanded: 1·5″.

Rugby Football has been played regularly during this term. Regular fixtures were arranged for the 1st and 2nd Teams. The 1st XV have played 19 matches, of which 14 were won and 5 lost. The principal fixtures were against the R.M.C., Sandhurst, which was won by 25 points to 3, and against the R.M.A., Woolwich, which was lost by 0 points to 40. The team, which has shown great keenness, has had a most successful season. The Inter-Squadron Rugby match was won by "B" Squadron by 24 points to nil.

Association Football has been played regularly during the term. One match has been played, which was won. The Inter-Squadron match was won by "B" Squadron by 3 goals to 1 after a re-play.

There has been a good attendance for Skill-at-Arms this term, and great keenness has been shown. The Inter-Squadron Skill-at-Arms Competition was won by "B" Squadron by 7 defeats to 20 defeats.

The Beagling season 1924-25, up to date, has been successful. Everywhere the pack has been welcomed by landowners and farmers. The fields have been large and well attended by Cadets. Hounds have been out on 17 days, and accounted for 6½ brace of hares.

Flight-Cadets Passing Out.—The IV Term, who are now due to pass out, and are recommended for commissions if they successfully pass their examinations, number 21.

The average flying time of these Cadets is:—

Observing	5 hrs. 45 mins.
Avro dual	18 hrs. 30 mins.
Avro solo	20 hrs. 10 mins.
Bristol Fighter dual	5 hrs. 35 mins.
Bristol Fighter solo	11 hrs. 0 mins.
D.H. 9a dual	2 hrs. 0 mins.
D.H. 9a. solo (9 Pilots only)	4 hrs. 50 mins.

The average flying time flown by IV Term Cadets, with dual control before flying solo, is:—

Avro	10 hrs. 2 mins.
Bristol Fighter	2 hrs. 25 mins.
D.H. 9a. (6 Pilots only)	1 hr. 22 mins.

Of these, the shortest times are:—

Avro	4 hrs. 45 mins.
Bristol Fighter	0 hrs. 30 mins.
D.H. 9a.	0 hrs. 35 mins.

Awards.—The Sword of Honour, presented to the best all-round Flight-Cadet in the Senior Term, has been awarded to F./Cadet Under-Officer G. R. Beamish.

The R.M. Groves Memorial Prize for the best all-round Pilot in the Senior Term, has been awarded to F./Cadet Corporal S. H. V. Harris.

The Abdy Gerrard Fellowes Memorial Prize for the Flight-Cadet obtaining the highest total marks in Mathematics and Science has been won by F./Cadet Sergt. A. H. W. J. Cocks.

The Inter-Squadron Rugby Cup: "B" Squadron, 24 points to nil.
The Inter-Squadron Association Cup: "B" Squadron, 3 goals to 1.
The Inter-Squadron Skill-at-Arms Cup: "B" Squadron, 7 defeats to 20.

CRANWELL CHARIVARIA.

WE learn that, owing to repeated disappointments, the sundial situated near the Officers' Mess has sent in its resignation.

* * *

For a similar reason the Meteorological Hut will issue its forecasts in future on paper with a one-inch mourning border.

* * *

We understand that from January 1st, 1925, all weather reports will be published in accordance with the new scheme of "alternate forecasts," of which the following is a short example:—

A {cyclone / anticyclone} centred over {Ireland / Europe} is moving {East / West} the weather, in consequence, will be {wet / fine}. Further conditions {unsettled. / settled.}

The recipient of the forecast can then delete the words which do not apply.

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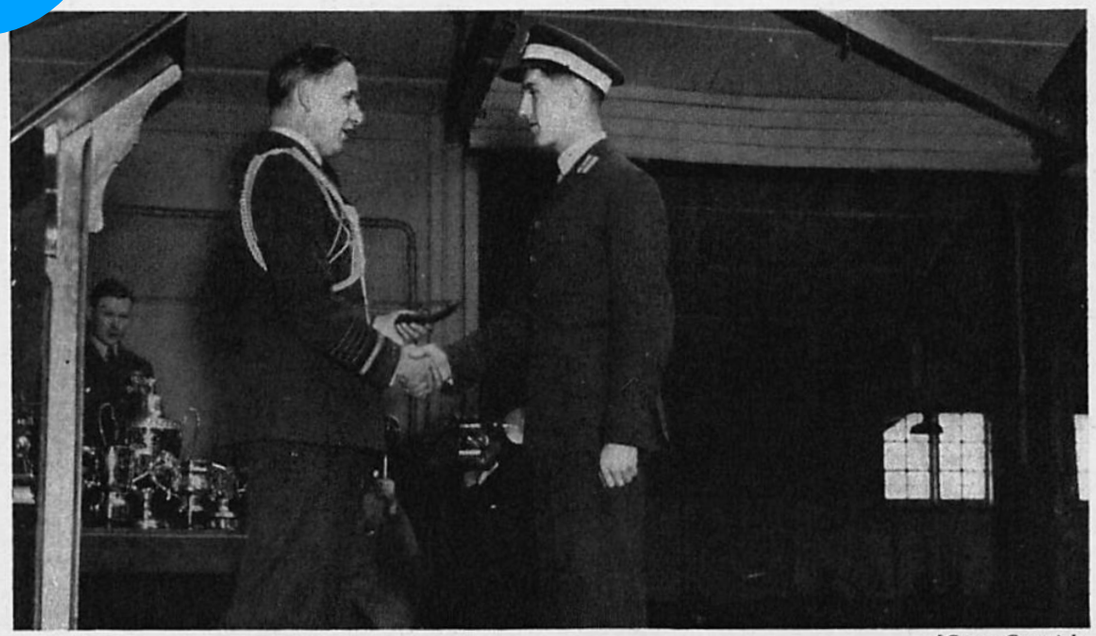
June 1950 - 49 Entry and FIRST (E&S) Graduation (1)

DIGBY'S FIRST GRADUATION



[*Crown Copyright*

LORD TEDDER PRESENTS THE MEDAL OF HONOUR

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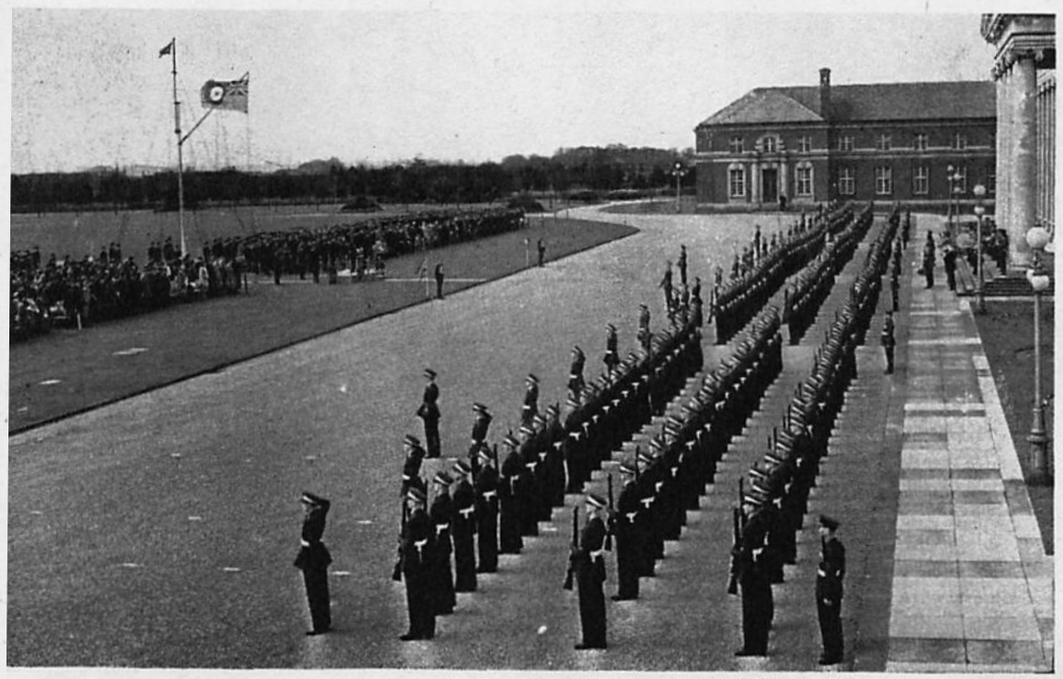
LORD AND LADY TEDDER ON THE COLLEGE STEPS

[*Crown Copyright*

LORD TEDDER INSPECTING THE DIGBY SQUADRON



[*Photo: Gale & Polden Ltd., Aldershot*

LORD TEDDER RECEIVES THE SALUTE

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June 1950 - First (E&S) Graduation (2)

[*Photo: Gale & Polden Ltd., Aldershot*

PRIZEWINNERS, NO. 1 (E. & S.) ENTRY

F.C. Sgt. D. C. Robinson. F.C. U./O. D. I. O'Hara. F.C. D. F. Bates.

Face page 83

[*Photo: Gale & Polden Ltd., Aldershot*

No. 1 (E. & S.) ENTRY

Back Row—F.C. A. Breaks. F.C. D. C. A. Lloyd. F.C. S. H. D. Weigall. F.C. T. G. C. Caton. F.C. P. M. Randolph.
Front Row—F.C. Cpl. A. B. McGuire. F.C. Cpl. B. J. Longworth. F.C. Sgt. D. C. Robinson. F.C. U./O. D. I. O'Hara. F.C. Sgt. D. F. Bates. F.C. Cpl. P. A. Richardson. F.C. Cpl. M. D. Fenner.

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June 1950 - 49 Entry and First (E&S) Graduation (3)

No. 49 ENTRY

ORDER OF MERIT

W. F. Knapper	Sword of Honour; King's Medal; Rugby; Athletics; Boxing; Dramatics; Debating.
D. Mullarkey	Sassoon Memorial Prize; Chance Memorial Prize; Dramatics; Debating; Ski-ing; "C" Gliding certificate.
P. D. Armour	A. G. Fellowes Memorial Prize; Rugby; Sailing; Secretary, Ski-ing.
W. L. Bull	Squash; Mountaineering.
P. G. Nickoll	Air Ministry Prize; R.U.S.I. Award; Soccer; Dramatics; Debating; Editor, JOURNAL.
I. A. N. Worby	Ski-ing; Dramatics; Debating.
J. R. Rogers	Gliding; Mountaineering; Photography; Engineering; captain, Riding; "C" Gliding certificate.
R. Pavey	Captain, Rugby; Cricket; Sailing.
M. Short	Secretary, Dramatics; Secretary, Debating; JOURNAL.
A. W. Powell	Fencing; Dramatics; Debating; Sailing; Ski-ing.
I. Gordon-Johnson	Rugby; Athletics; Boxing.
P. F. Keeling	Secretary, Cross-Country; Athletics; Dramatics; Ski-ing.
K. V. E. Gilbert	Captain, Tennis; Squash; Dramatics.
R. H. Gidman	Secretary, Dramatics; Debating; Librarian.
H. S. Carver	Cricket; Ski-ing.
R. W. Burgess	Swimming.
B. J. Ball	Boxing; Sailing.
A. Turner	Ensign; captain, soccer.
B. N. Bennett	Gliding; Ski-ing; "C" Gliding certificate.
G. S. Goodsell	Secretary, Music; Dramatics; Senior Librarian.
R. Dyson	Captain, Cross-Country; Athletics; Dramatics; "C" Gliding Certificate.

No. 1 (E. & S.) ENTRY

ORDER OF MERIT

D. F. Bates	Secretarial Prize; Cricket; Hockey; Dramatics.
M. D. Fenner	Captain, Cricket; Rugby; Soccer; Squash.
D. C. Robinson	Equipment Prize; Cross-Country; Athletics; Soccer; Photography.
A. B. McGuire	Rowing; Soccer; Dramatics.
D. C. A. Lloyd	Golf; Swimming; Tennis; Music.
D. I. O'Hara	Medal of Honour; Athletics; Squash; Rugby; Ornithology.
P. M. Randolph	Hockey; Soccer; Riding.
B. J. Longworth	Tennis; Dramatics; Rugby; Hockey.
P. A. Richardson	Swimming; Tennis; Athletics; Rugby.
S. H. D. Weigall	Cricket; Rugby; Soccer.
T. G. C. Caton	Athletics; Dramatics; Sub-Editor, JOURNAL.
A. Breaks	Hockey; Athletics; Boxing; Engineering.

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June 1950 - First CCF Camp at Cranwell (1)

THE YOUNG IDEA

We seldom properly understand what a politician means by the "cross-sections" he is so fond of talking about. But anyone at Cranwell between 28th March and 22nd April would easily have recognized "a cross-section of English schools," for at the Combined Cadet Force Camp there were contingents from seventeen schools in all parts of the country. Altogether, 219 cadets and sixteen officers attended; the largest party was from Whitgift School, which sent twenty-three cadets and one officer; and the smallest was the single gallant cadet from Cheltenham.

The cadets were presented with a programme that was full, varied and interesting. It was interesting largely because the organizers of the camp had wisely emphasized practical instruction; there were no purely theoretical lectures, nothing was described that was not there to be seen and handled, and the cadets were allowed to twiddle knobs to their hearts' content.

Flying was naturally the great attraction, and the weather was kind, for the cadets were kept on the ground for only two half-days during the whole period. Each cadet had two hours' flying instruction in the air in a Prentice or Harvard, and also some navigation instruction in an Anson. The back seat of the Prentice caused a good deal of air sickness, but this did not deter even some of the worst sufferers from staying on after their parties had left, in the hope of getting more flying. One young man remained for an extra five days, and then, having secured no less than seventy minutes' flying in a single morning, managed to drag himself away. He was one of the most excited of those who had watched, on two previous Sundays, examples of most current operational types of aircraft being flown in to Cranwell, and listened to the pilots talking about their aircraft.

The visits the cadets made were popular, one of the most successful being that to 1109 M.C.U. at Boston, to see something of air-sea rescue work. The cadets went to sea in a high-speed launch, and some even professed regret that the water was so smooth. Although they travelled at 30 knots, the launch did not leap and lunge as dramatically as the cinema had led them to expect it would.

It was perhaps through watching the No. 49 Entry Graduation Parade that the cadets became enthusiastic for ceremonial drill. Weekly drill competitions were held (won by Cranbrook, Royal Liberty and Portsmouth Grammar), and championships were awarded to the contingents that obtained the most marks for drill over the whole period of camp; these went to Cranbrook, Varndean, and Royal Liberty. Portsmouth Grammar School, having won the final week's drill competition, had to provide the guard of honour at the passing-out parade, which was taken by Group Captain Corbally. Without prompting from their officers, these boys volunteered for extra drill in preparation for the ceremony, and acquitted themselves very well indeed on the parade. The cadets also appreciated the honour of being allowed to conduct the ceremony of hoisting the Station Colour on most mornings during their stay.

The intricacies of radio, radar and elementary aerodynamics in no way daunted the cadets. They operated a mock fighter sector operations room, complete with dummy aircraft containing cadets, and their enthusiasm awakened war-time memories for some instructors. More than one cadet made his voice sound exactly like an irascible Group Captain with his P.B.X. in a tangle at a tense moment. The cadets were also introduced to "Gee" and "Rebecca," they used a Homer to bring in real aircraft, and they were allowed to record their own voices. This last gave them the unpleasant shock we all feel when we first hear the horrible noise we are accustomed to inflict upon our fellow men. In the wind tunnel they saw how and why a plane stalls, and they learned about Bernoulli's theorem. It was here that the cadets with a bent for science surprised their instructors by their grasp of technical problems.

"Weapons" was a branch of training which the cadets tackled with enthusiasm. They made the acquaintance of the .5 Browning and the 20-mm. Hispano, and fired the .303 Browning on a 25-yard range. The R.A.F. Regiment instructors were suitably impressed by the savage expressions on the cadets' faces as they buried the bullets in the sand.

But the most exciting part of the ground combat training was the night operations. One group of cadets had to pass undetected over a frontier manned by their fellows and members of the camp staff. On the first operation, no one remembered to brief the R.A.F. Police, with the result that the security patrol was constantly being arrested by the frontier guards. It is also alleged that these cadets on one occasion behaved so ferociously that the dog-handler released his dog, which failed, however, to catch a cadet who had suddenly observed that the operation was becoming a trifle too realistic.

It was not surprising that the cadets showed little desire to go outside the camp for amusement and relaxation. There were games and swimming. Determined to extract the utmost experience from life at Cranwell, most of the rugger schools chose to play soccer, while the soccer schools played rugger. The cadets also made good use of the instruction offered at the swimming bath, and many obtained the A.T.C. Swimming Certificate. Informal talks and discussions in the evenings were a popular diversion, and such subjects as "Bomber Tactics," "The Work of Fighter Command," and "The Royal Air Force College" provoked some shrewd questions and comments.

The camp was commanded by Squadron Leader B. R. Champion, whose second-in-command was Flight Lieutenant A. R. Gordon-Cumming. Flying Officer R. I. Hudson, from No. 64 Reserve Centre, was Adjutant, and Pilot Officer R. H. Gidman, who had just passed out with No. 49 Entry, came back to act as Assistant Adjutant. Congratulations are due to these officers, and to all the others who helped to run the camp. They showed the schools what the Royal Air Force has to offer, and corrected false impressions of the Service which some of the boys had picked up from gossip.

The cadets naturally saw a good deal of the Royal Air Force College and acquired much official and unofficial information about the life and work of a Cranwell cadet. They showed great interest, and on their conducted tour of the College bombarded their hosts with questions. Some of the bolder spirits simply asked: "How do you get into Cranwell?" The more cautious asked first: "What's it like at Cranwell?"

The cadets are to be commended on their smartness and the keenness they showed to take advantage of all that was offered to them. But the camp can take only a small share of the credit for this. We must not forget the work which has been going on in the schools, and which provided the groundwork upon which a successful fortnight's training could be based. For example, two fourteen-year-olds from Portsmouth South Grammar School arrived at the camp as fully proficient C.C.F. cadets. The Air Force as a whole owes gratitude to the schools. Before long we shall be meeting these boys in the ranks of the Royal Air Force; some, we hope, will be cadets of the Royal Air Force College. We shall then fully realize the worth of the work of all those who shared in their preliminary training.

R. G. R.

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June 1950 - First CCF Camp at Cranwell (2)

THE C.C.F. CAMP AT CRANWELL

[*Crown Copyright*

Pupils change over: the smallest cadet at the camp (seated) is about to start on a training flight.

[*Crown Copyright*

Air-Sea Rescue. The cadets experience speed on the water in a R.A.F. launch.

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Spring 1962 - Leadership Checklist (1)

CHECK-LIST FOR LEADERSHIP

Group Captain E. H. Lynch-Blosse, O.B.E., whose article "Queen of the Battlefield" *appeared in* "The Journal" for Autumn 1959, *has sent us these thoughts on Leadership.*

A fighting man, intelligent, with the capacity to produce results ; an honest man, forceful, commanding the respect of his juniors, a man prepared to be ruthless with frills which deflect the proper aim ; a man prepared always to listen to the advice of his specialists, but with the strength and discrimination to reject it if unsound : a man who absorbs knowledge and wisdom with the years : a man who, at the end, will have trained and encouraged others (possibly quite differently made) to succeed him ; a dedicated man.

This paragon, according to my Battle of Britain Souvenir Programme, is *The Compleat Royal Air Force Officer*. No doubt there are some like this, and good luck to them — they will feature regularly in the promotion lists. Most of us, however, fall short of these standards — but not for lack of advice. A great deal has been written and spoken about leadership by people very well qualified to do so — people who measure up to the standards quoted above, but what they have to say can be confusing, since it seems to be necessary to have so many qualities in order to be the sort of chap one would like to be.

It might be an interesting, and possibly instructive, exercise, therefore, to try to compile a simple check list of the qualities required — there are check-lists for vital actions before take off and landing, so why not have one for Leadership which, in a different way, is just as vital ?

The first thing to do is to see what the experts have to say on the subject, and who better to start with than Field Marshal Viscount Montgomery ? First, his definition of Leadership :—

The capacity and the will to rally men and women to a common purpose, and the character to inspire confidence.

The qualities listed by the Field Marshal as necessary to a Leader are many, and, include :

Force of Character
Determination
Conviction
Sound Judgement
Self Confidence
Good Judge of Character
Honesty
Sincerity
Self Control
Courage
Infectious Optimism
Knowledge of Human Nature
Ability to Dominate
Ability to Select Subordinates
Ability to Master Events

This is an imposing list, even if some of the qualities mentioned are fairly obvious, but, says the Field Marshal :

The true test of a Leader is the feeling you have when you leave his presence after a conference or interview. Have you a feeling of uplift and confidence ? Are you clear as to what is to be done and what is your part in the task ? Are you determined to pull your weight in achieving the object ? or is your feeling the reverse ? ("The Sunday Times").

The Field Marshal places Commanders in three categories :

(*A*) *Those who have faith and inspiration, but lack the infinite capacity for taking pains and preparing for every foreseeable contingency — which is the foundation of all success in war. These fail.*

(*B*) *Those who possess the infinite capacity for taking pains and making preparations to a degree amounting to genius. Of this type I would cite Wellington as a perfect example.*

(*C*) *Those who possess this quality, are inspired by faith and conviction which enables them, when they have done everything possible in the way of preparation and when the situation favours boldness, to throw their bonnet over the moon. There are moments in war when to win all one has to do this . . . . .*

General Sir Ian Hamilton, in his excellent book "The Commander" summed up rather more briefly the main qualities required in a Leader of Men. They are :

Self Confidence
Initiative
Moral Courage
Perception
Ability to Organise
Ability to Inspire

General Sir Brian Horrocks has studied the subject in another medium. In a television series he high-lighted the careers of four British heroes — Cromwell, Wellington, Marlborough and Nelson — in an attempt to answer the question "What makes a great captain ?" In his studies, the General drew attention to four qualities which these Commanders all had and which contributed greatly to their success, namely :

The art of administration and attention to detail.

The ability to extract the maximum of advantage from topography ("an eye for country").

Personal leadership in battle.

The ability to maintain *that calm courage in the midst of tumult, that serenity of soul in danger, which is the greatest gift of nature for command.* (Voltaire).

It is interesting, if incidental, to note that Cromwell became a great soldier in his forties and Marlborough won most of his victories in his fifties — so none of us need despair !

Lord Wavell was another great commander who was very hot on administration — *The real crux of Generalship* he called it, and he went on to warn against the dangers of peace-time training. *It is in peace* he wrote *that regulations and routine become important and that the qualities of boldness and originality are cramped.*

Among the really great operational Royal Air Force Commanders of World War II was Air Chief Marshal Sir Basil Embry. Some of his views on leadership are expressed, with characteristic force, in his book, "Mission Completed" :

. . . . The Commander should, by his force of character and personal example in the air and on the ground, influence and inspire his subordinates . . . . If the leader knows less about the practical problems of flying and fighting in the air than his subordinates and has not shared with them their common dangers, how can he command their respect ? The first essential of good leadership . . . . . is to have leaders who will fight, or in peace prepare to fight, and who can inspire their subordinates to do likewise.

As all who knew him will recall, the Air Chief Marshal practised, more than most, what he preached.

And so on. Most of the great commanders of our time have written and spoken on the subject of leadership and it is a pity that one cannot quote them all. However, throughout the books, articles, broadcasts, lectures and speeches there is the one theme — the need to develop and make use of those qualities without which no leader can succeed. These qualities are many and opinions on their relative importance vary.

It may seem impertinent to comment on the extracts quoted above, but, on considering them, it does seem possible to come to some conclusions :

(A) Many of the qualities required are ordinary Christian virtues which are not peculiar to any one class, profession, grade or rank and which the great majority of people have to some degree or other.

(B) Others, which have a more specifically military application, can be developed fairly easily by study and practice in the normal course of service life.

(C) There remain a very few qualities, which seem to be based largely on individual personality, which are apparently hard, but by no means impossible, to come by.

Is it possible, then, to devise a short and simple check-list for those of us who have much to learn on the subject of Leadership but are keen to try ?

Here, as a basis for argument, is one :

AIM. Know it, explain it and maintain it.

INITIATIVE. "Who dares wins."

RELAX, but be ruthless when necessary.

MORALE.

ADMINISTRATION. Attention to detail.

NEVER pass the buck.

SINCERITY, Sound judgement.

HONESTY is always the best policy.

INSPIRE your subordinates by

PERSONAL example.

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March 2007 - Leadership Essay (2)

AVM Gray Leadership Essay Prize

The late Air Vice-Marshal J A Gray CB CBE DFC GM underwent flying training at Cranwell in 1917. On 1 April 1918 he was transferred to the RAF where he served for 36 years, including a tour as a flying instructor at Cranwell in 1935. After a distinguished career he retired in 1954 and died in 1987. In his Will he bequeathed a share of his estate to the Royal Air Force College, and the legacy was used to set up a Trust Fund entitled 'The AVM Gray Memorial Fund'. The Fund supports projects that are concerned with "improving the efficiency of the RAF by encouraging the study of leadership". This may be through essays or presentations. In 2006 the memorial fund was used to support an AVM Gray essay and leadership presentation competition.

GOERING AND DOWDING - A COMPARISON OF LEADERSHIP DURING THE BATTLE OF BRITAIN

by Flying Officer Priestley (216 IOTC)

Air Chief Marshal Sir Hugh Dowding and Hermann William Goering, German Reichsmarschall, commanded opposing sides during the historic Battle of Britain. This was a battle like no other before and no other since. It is now as ingrained in British history as deeply as Trafalgar and the Battle of Hastings[1]. This paper will assess the leadership of both commanders, the decisions they made and the impact of these decisions upon the Battle and ultimately the Second World War.

It will be proved that Goering failed completely as an Air Leader during the Battle of Britain. This was largely due to his inability to accept the facts presented before him and his choice to over estimate the capabilities of the Luftwaffe. In addition, in agreement with Hitler, he broke one of the key principles of war, which is Selection and Maintenance of the Aim[2]. Dowding as we will see had an innate ability to plan and grasp the reality of a situation particularly at the strategic level. However, he does not escape criticism due to his failure to put an end to the disagreement on tactics between two of his most senior commanders, which in different circumstances could have had a seriously adverse effect on how the air battle developed.

To be able to make an objective assessment of Dowding and Goering as leaders, we must take into account the situation both leaders found themselves in. Dowding starting the battle with his brain child: the first ever three pillared Integrated Air Defence System, with an Air Force of modern heavily armed metal skin fighters, but heavily outnumbered. Goering on the other hand had an astonishingly successful Air Force designed for tactical lightning war (Blitzkrieg). He was, however, presented with a previously unexpected and unplanned mission to destroy the RAF and pave the way for Operation Sealion, the German invasion of Britain.

Dowding and Goering as characters were poles apart: Dowding austere, aloof and self opinionated,[3] traits that made relationships with ministers and fellow senior officers difficult at times. Crucially, though, he did develop good relationships with those directly involved in his business, namely Lord Beaverbrook, the Minister for Aircraft Production, and Air-Vice Marshal Keith Park, one of his most loyal Group Commanders. Goering on the other hand had a colourful and engaging character albeit mixed with a degree of pomposity and vanity. He was politically aligned with his leader but tainted by a history of mental health problems, exacerbated by his addiction to Morphine and later Paracodeine, a legacy of an injury sustained during the 1923 beer hall putsch.[4] Both men had seen action in the First World War and fought with distinction, but at no time did they display the acts of outstanding leadership that would indicate their potential to become major players some twenty years later.

Following the allied evacuation at Dunkirk, the two leaders had different thoughts and priorities. Goering chose to allow large elements of his Luftwaffe to go on leave back to Germany. This could be seen as a leader who cared for the welfare of his troops, giving them a reward for a job well done so far. By doing so, though he missed a chance to evaluate with his commanders and pilots what lessons could be learned from the campaign so far. And there were several lessons. Although successful, a price had been paid in terms of aircraft and aircrew. The Luftwaffe failed to seriously disrupt the allied retreat at Dunkirk and suffered heavy losses to the Spitfire and Hurricane Squadrons flying over the channel from England. As General Adolf Galand wrote, 'Dunkirk should have been an emphatic warning to the leaders of the Luftwaffe'[5]. This was an early example of Goering's inability to evaluate the situation before him.

Conversely Dowding became more focussed than ever, fully appreciating the dire situation Britain was in. The Army was in disarray and we had a critical shortage of fighter aircraft and pilots mainly due to a futile attempt to stop the inevitable fall of France. Dowding was strongly against the despatching of aircraft at this late and desperate stage as he viewed it as a lost cause. After the fall of France he was heard to say, 'Thank God we are now alone',[6] a clear reference to the relief he felt at not having to lose any more of his invaluable fighters, which would be desperately needed for the next phase of the War.

Before evaluating the leadership performance of Dowding during the Battle itself, his contribution beforehand must be mentioned. From 1930 acting as Air Member for Supply and Research he championed the development of the single seat, metal skinned monoplane which transpired into two brand new fighters namely the Hurricane and later the Spitfire. He also saw the potential of Radar as an Air Defence tool. With these projects in place he set about creating Fighter Command, formed during 1936 with Dowding himself as the Commander in Chief.

During the Battle itself, Dowding largely left the day to day tactical decisions to his group commanders. This was a fine example of how a Commander in Chief should work,[7] thus allowing himself to evaluate what the future course of the battle may be and to plan accordingly. This hands-off approach did contribute to a destructive disagreement over tactics between two of his Group Commanders, AVM Keith Park of 11 Group and AVM Trafford Leigh Mallory of 12 Group. Park was an advocate of small formations of fighters getting in amongst the Luftwaffe formations as soon as they were detected by radar. Leigh Mallory, influenced by one of his squadron commanders (Douglas Bader) was in favour of a more time consuming approach, which involved large formations of fighters attacking in bulk. Both methods had successes, but the more important issue was the ill feeling that the whole episode created, not only between the two Group Commanders but higher up the chain to the Air Ministry. Unfortunately, Dowding did little to stop the rumblings and for this must take some blame. It also could have had serious consequences particularly with lack of cooperation between the two fighter groups. In some instances 11 Group's airfields were left defenceless as the protectors from 12 Group led by Bader ignored orders and entered the main Air Battle.[8]

Meanwhile in July 1940 Goering's leadership challenges were far greater, although he was yet to realise it. Typically boastful and arrogant he promised that the RAF would be defeated within five days. Furthermore, on the 16th of July he stated that Operation Sealion would not be needed at all, as Britain would surrender to the attacks of the Luftwaffe.[9] Significant German loses following Initial skirmishes over the channel should have given Goering a further indication of the difficulty the Luftwaffe was to face. Adler Tag marked the start of the main Battle with the Germans implementing a plan of destroying the RAF and its Radar sites. However, Goering failed to appreciate the superior firepower of the British fighters, eight guns as opposed the ME109's four, and how ineffective the JU87 and Me110 would be when combating with faster more agile aircraft. The trend for the early part of the battle was repeated with the Luftwaffe inflicting severe damage to airfields and aircraft but suffering huge losses in doing so. These problems were exacerbated by the inadequate range and time over the target capability of the escort fighters namely the Me109 which for some inexplicable reason was not fitted with drop tanks. Moreover, the Luftwaffe failed to fully appreciate the significance of Radar even though intelligence was well aware of its existence. The Germans also lacked a heavy four engined bomber, which, as the Battle changed to the strategic bombing of London, proved to be a major disadvantage.

Goering's biggest mistake as a leader, however, was to allow himself to be distracted from his strategic aim of destroying the RAF. In response to an RAF reprisal raid on Berlin, something Goering said would never happen, he switched the Luftwaffe's main effort into bombing London. This had three consequences: it allowed the RAF some breathing space to repair airfields and aircraft, it exposed his ill-suited and poorly defended HE111 bombers to the rejuvenated Fighter Command and finally it led to a German defeat in the Battle of Britain.

The RAF was in a dire situation during the Battle of Britain, but ineffective leadership from Goering in the form of poor evaluation contributed to the fact that history would remember him as an infamous and ridiculed figure. After the war he incorrectly prophesised that there would be statues erected in his memory all over Germany for the next 50 years. This sums up his character as a leader in that he was a poor predictor of the future and his vanity was monumental.[10] Dowding, however, would hardly be remembered at all, particularly by those who continue to benefit from the decisions and action he took. In terms of leadership the fact is there was no comparison between the two. Many leadership models could be used to analyse Dowding but probably the most appropriate would be the 'Situational' model. He was without doubt the right person at the right time with the right skills. The significance of the Battle cannot be overestimated. Had Britain lost and been successfully invaded by Germany, the course of the war and modern history itself would have undoubtedly changed dramatically.

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[1] Sqn Ldr Simon Braun (2005) *The Command and Leadership Competence of Air Chief Marshall Sir Hugh Dowding* (Air Power Review).
[2] Lee Asher (1972), p.112 *Goering Air Leader* (Duckworth).
[3] Basil Collier (1957), p.24 *Leader of the Few* (Jarrolds London).
[4] Lee Asher (1972), p.28
[5] Lee Asher (1972), p.8
[6] Robert Wright (1969), p.129 *Dowding and the Battle of Britain* (Macdonald London).
[7] Sqn Ldr Simon Braun (2005)
[8] Robert Wright (1969), p.177.
[9] Lee Asher (1972), p.92
[10] Lee Asher (1972), p.239

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March 2007 - Leadership Training (3)

LEADERSHIP AND OFFICER DEVELOPMENT

by Group Captain Robin Chambers RAF (Retd), GC OACTU (2003 - 2006)

The Royal Air Force has a unique character and ethos that is built on respect and trust between all ranks. The Service has also developed a style of leadership that reflects the technical nature of air power and the specialist expertise at all levels. However, air power is changing and the RAF is adjusting to meet the challenges of future warfare by replacing numbers with technology to produce a leaner but more capable force. However, success will still be dependent on effective leadership at all levels. The creation of the RAF Leadership Centre at RAF Cranwell has ensured a more coordinated 'through life' approach to leadership and one of their early tasks was to play a major part in determining the leadership objectives for the new Initial Officer Training (IOT) Course that was introduced in November 2005.

However, having watched the first 2 IOT Courses progress through the leadership syllabus and been responsible for the development of the next generation of RAF officers for the last 3 years, I wonder if we have over-focussed on the leadership strand of personal development at the expense of Officer Development? There is obviously more to Officer Development than leadership as a SNCO has well developed leadership skills, but are we in danger of producing graduates who would in fact be good SNCOs capable of implementing orders rather than free-thinking, innovative individuals responding to unforeseen situations in line with the Commander's intent? Does the 'Warfighter first' concept suggest being an officer second? Furthermore, do the graduates of the RAF College appreciate what is expected of them in an agile and rapidly changing Air Force? Do they realise that they have been trained to go out there to seek responsibility, use their initiative, be creative and make a difference? Conversely, if we have got our training right, is the Service really ready to accept a generation of officers who will be strong team players but will question why and, in keeping with Mission Command, will expect to be told what to do and not how to accomplish the task.

These questions were the source of many debates at Cranwell as we developed the new IOT syllabus and were also the subject of a presentation that I gave to challenge Term 2 cadets who had mastered the basic tenets of a functional approach to leadership and were starting to explore transactional and transformational styles of leadership. This article is written in the same vein in that it is meant to provide food for thought rather than an exhaustive list that guarantees success at IOT. I would also emphasise that this article is a very personal viewpoint. However, I am aware that the RAF is not alone in trying to redefine what it expects from its officer corps in a rapidly changing world.

The Partnership for Peace Programme, initiated after the fall of the Soviet Union, enabled many former 'Eastern Bloc' countries to put their forces on a more professional footing and their officers now have a greater appreciation of the role and conduct of an officer in the military profession and the responsibility and authority that go hand in hand with commissioning. As a result, a new term, 'Officership', is starting to be used in an attempt to define what an officer is and what he does. It is an Americanism as the term 'Officership' has been used in the USA and Canada for some time, but even the Royal Military Academy at Sandhurst has recently embraced 'Officership' as a significant part of their syllabus. Why then has it not appeared on the new IOT syllabus?

The glib answer is that it is an ambiguous word and the RAF has more 'ships' in its lexicon (leadership, airmanship etc) than the Royal Navy. Some would argue that officership is already covered by teaching leadership, others that there are elements of leadership that do not fully encapsulate what the word 'officership' is trying to achieve. In fact, officership has proved extremely difficult to define accurately as each Service seeks a particular contribution from its officers. At Cranwell these qualities and duties are covered by 'Officer Development' which is not taught as a standalone subject but is the synergistic effect of many aspects – leadership, professional expertise, communication skills, behaviour, responsibility and example; all of which are developed from a solid foundation of core values, ethos and heritage. In my arrival talk to new cadets I would stress that they had joined a professional way of life. Like all professions, medical, banking or law etc, there is a code of conduct, set of rules, standards to be achieved, and a social way of behaviour if you are to be accepted. However, more than those professions, they wanted to be an officer which means they want to lead others, take responsibility for other people, often older and more experienced and sometimes even professionally better qualified. Also they will have to be an example to others, but one of the hardest aspects is that they will have to earn the respect of others. You can now get a feel for why IOT is so challenging, for both the staff and students, in developing the knowledge, skills and confidence to become effective junior officers.

I think it is important to define an officer's role. Academics state that, in its simplest form, a military officer's role is the management of violence. Whatever your specialisation, this means the direction, operation and control of people and equipment which, by nature of our job in the RAF, involves danger, the management of risk and making decisions. Ideally, officers should do the right thing, at the right time and in the right way. Subordinates trust the 'boss' to get it right and the public have no lower expectation of the professionalism and competence of UK Forces. No wonder that striving for excellence is one of our core values. In sum, officers enjoy a special position and are expected to be experts in their profession.

This demand for excellence places a responsibility and an expectation on the individual that grow with experience and time. The process is started at the RAF College by first imbuing the right attitude, laying a solid foundation of core values and putting in place the initial blocks on which to build in specialist training, on successive tours and during Force Development training.

In discussing the role of an officer, I have highlighted that professional expertise, as a specialist and as a war-fighter, is crucial and therefore could be considered as one of the pillars of Officer Development.

The second pillar of Officer Development is Leadership or, perhaps more accurately, Command which embraces leadership and management. The Command pillar covers the early, faltering steps as a junior officer dealing uneasily with ambiguity and risk, through growing confidence to creativity and influence as a senior officer. The development of the IOT leadership syllabus, combined with the introduction of the Force Development Sqns on Stations and other initiatives by the RAF Leadership Centre, has really strengthened this pillar and should, with time and continued support and enthusiasm by execs, produce more competent leaders at all levels.

So far, I have focussed on what an officer does but the secret of success is the fusion of the person with the task that produces the inspirational and efficient leader and credible officer. I have labelled the third pillar 'Example', as it covers personality and character and embraces the role modelling that is essential to get the best of self and others. If you don't have the desire to succeed, why would anyone want to follow you? The example an officer sets tells their peers, subordinates and superiors that they are either part of the problem or part of the solution. It is obvious that if you set the right example, you become part of the solution and will earn the respect of others through your actions. Clive Woodward, the England World Cup Rugby Coach only wanted 'energisers' in the team; he had no place for 'energy sappers'.

It is this same character, attitude and example that enable an officer to relate to his or her team, motivate them, earn their respect and create a winning culture. It is a form of overt and subliminal communication. You have done your job as a leader if every member of you team owns the vision; it is a far more effective way of operating than cajoling and persuading. This is why IOT is not just a series of hurdles or exercises to be passed. It is a cerebral and character building course that puts cadets under pressure so that they learn to not only bond with their team but also show the integrity and strength of character that will enable them to face those difficult decisions that are part of an officer's everyday life. The only way to develop these virtues is by habit.

Officers have to be proactive and actively seek responsibility so that as they progress through the promotion ladder they are used to taking the initiative and seizing opportunities. Therefore, I have labelled the 4th pillar 'Responsibility' which is not only the acceptance of responsibility (and the consequences) in appointments and jobs that come your way but also actively seeking responsibility.

General Goldfein, the Vice Commander of the USAF Air Combat Command, is directed by what he describes as his personal compass where, at the end of each day, he asks himself 3 questions: am I setting a good example; is the team ready; am I worthy to lead these people? In discussion with the cadets, there was a strong feeling that there should be a 5th column to reflect the requirement for officers to be constantly developing, learning and exploring – reassurance for Air Marshal David Walker's philosophy of "develop deep, think broad".

But is there a 6th column? I set this challenge to the staff and cadets, not because I wanted symmetry but to ensure that I hadn't missed anything and because I felt that another column could create a very powerful message. After continued debate it was decided that the 6th column would be your own personal column. Everyone of us brings something quite unique to the Air Force –intellect, charisma, courage, audacity etc and any model of 'officership' should acknowledge that special contribution and also recognise that no two officers are the same.

The adopted style of officer training has been a great success but I think we could do more to increase the awareness and importance of Officer Development – hence this article. However, as the course settles down and the staff start to develop the full potential of the training opportunities, consideration should be given to creating a bespoke Officer Development package. The training objectives could pull together the many strands already taught in different subjects but, most importantly, a specific subject would increase the emphasis, give cadets a clearer direction of what is required and enable the staff to focus the training more accurately.

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2010 - OACTU View on Leadership (4a)

Attributes for RAF Leaders: What Does OACTU Believe is Important?

Flight Lieutenant Artus, Deputy Squadron Commander, Leadership Training Squadron

During the final full term of 2009, in which Initial Officer Training Course 16 (B Squadron) graduated, I surveyed the whole of OACTU by email, asking a simple question: which do you think is the most important attribute of an RAF leader, and, if possible, why?

There are 9 attributes for RAF leaders. These are, alphabetically (as detailed in the charts numerically):

1. Able to handle ambiguity
2. Able to lead tomorrow's recruit
3. Emotionally intelligent
4. Flexible and responsive
5. Mentally agile – physically robust
6. Politically and globally astute
7. Technologically competent
8. Warfighter, Courageous
9. Willing to take risks

On analysing the data I split the responses into staff and cadet subdivisions – main IOTC squadrons and other significant parts (these were DELTA Flight – those undertaking additional leadership and/or officer qualities training, RAD Flt – those undertaking rehabilitation or administratively suspended from main squadrons and SERE, the Specialist Entrant and Re-Entrant course).

Key Comparisons

Staff and Cadets

As can be seen from the charts, the main attributes highlighted are 'Flexible and responsive' and 'Mentally agile – physically robust'. These two accounting for over 54% of all votes cast.

Cadets

Of the cadets, all sub-divisions (other than SERE) voted for 'Flexible and responsive' as their most important (RAD Flt voted it equal highest with 'Able to lead tomorrow's recruit'). In addition, all main IOTC squadrons 'Mentally agile – physically robust' received the second highest number of votes. The differences were:

RAD Flt – 'Able to lead tomorrow's recruit' (equal highest with 33%).

DELTA Flt – Emotionally intelligent (20% but with a small number of responses).

SERE – Emotionally intelligent (equal highest with 50% but with a small number of responses).

Staff

The staff's top two attributes were opposite to that of the cadets with 'Mentally agile – physically robust' receiving the highest number of votes (30%), compared to 'Flexible and responsive' (26%).

What do these results mean?

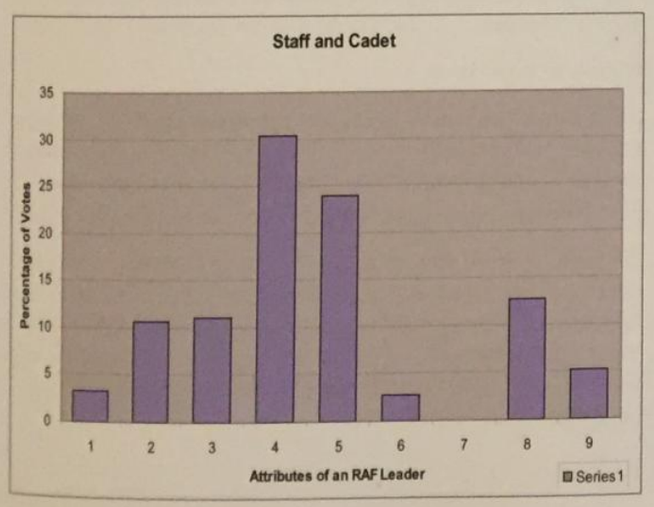
What can be inferred from these results? Why do the main squadron cadets, irrespective of their place within the training system, value certain attributes above the others? Why do staff views differ from that of the cadets?

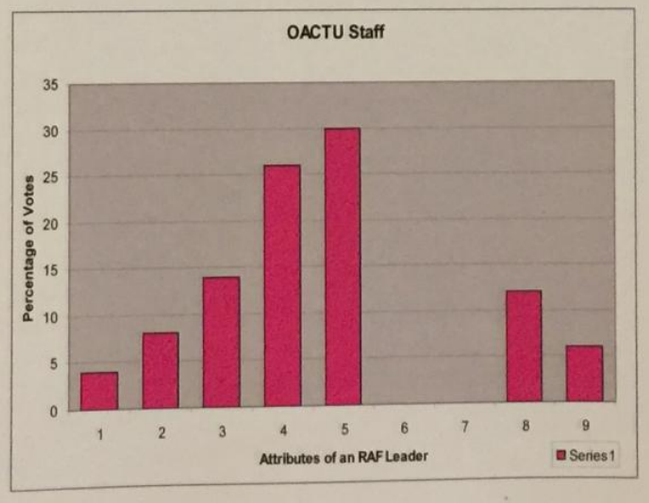
Why responders value 'Flexible and Responsive'?

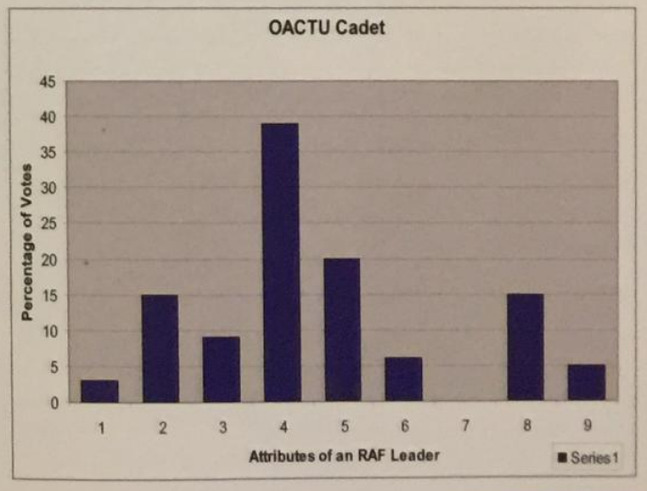
The definition of the attribute 'flexible and responsive' is:

"In a world that is now changing faster than ever, where technology is advancing rapidly, the RAF needs leaders who are flexible in approach and able to consider new ways of doing things. RAF leaders must be open minded, responsive to change, constantly looking for the opportunities that change brings and be able to cope with the discomfort that is associated with change."

An immediate question to ask (which is valid for all attributes) is: did the respondents read the RAF definitions prior to making the choice, or did they use their own understandings of the attributes?







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2010 - OACTU View on Leadership (4b)

My belief is that the majority of respondents used their own understanding of these attributes when making their decisions.

Whatever the answer, I believe the key word is responsive. It would appear logical that the majority of people who actually responded to the survey do value responsiveness and are acting out their values by responding the questionnaire. One way of determining whether this survey does represent the overall feelings of OACTU would be to impose this questionnaire on all members of OACTU, something outside the scope of this study and the power of the author!

Why do staff responders value 'Mentally agile – Physically robust?

The definition of the attribute 'Mentally agile – physically robust' is:

"Our leaders need to be able to handle complex and multifarious problems and have the creativity and mental agility to move quickly between various concepts. Their thinking must be innovative and their minds receptive. They must be physically robust and able to withstand the strain of operations, so that their mental capacity does not fail them under stress."

What is it in this definition that attracted the most responses from staff and the second highest number from cadets? Is it the balance between the physical and mental capabilities that will seem sufficient to cover all aspects (again, I question whether respondents read the RAF definition)? Is it the statement regarding 'strain of operations' – something that the majority of staff members are acutely aware of – with the majority having arrived at Cranwell straight from operational tours? I believe this is the key aspect. OACTU staff are measuring graduating officers against what their expectations for operations are.

Respondents Comments.

Of the respondents, 18 staff and six cadets provided additional information as to why they had chosen their specific attribute. Some comments are as follows:

Able to handle ambiguity.

"To be able to handle ambiguity, in an ever changing global environment is essential if you want to lead your personnel forward as you become the certainty that they look towards in an uncertain world." Flight Lieutenant Mark Hassall

Able to lead tomorrow's recruit.

"…if that leader is unable to lead their personnel, the end goal of any task will either not happen, be very poor, or turn out to be not cost effective." Flight Sergeant Paul Batsford

"…leading is what we are all about. We must have the other 8 attributes, to varying degrees, to be able to lead; hence my choice." Flight Lieutenant Martin Wyer

"There are two aspects to this attribute that I feel makes it the most important of the list. Firstly, an officer is always a role model for the new airmen/airwomen entering into the Service. The impression you give them will be hugely influential on their attitude to the RAF as a whole. You, as their first officer could be their last if you don't lead them effectively. Secondly, this attribute focusses on the future. The RAF, and its personnel, is continually changing and the officer needs to keep up with these changes. How you lead now will be different to how you'll need to lead in the future as the demographic changes; particularly as we get smaller." Officer Cadet Richard Morgan

Emotionally Intelligent

"Knowing what makes me tick and understanding my people is fundamental to everything I do as this encompasses confidence and trust." Flight Lieutenant Paul Dodds

"Leadership is not just an intellectual, cognitive process it is also a social, behavioural, spiritual and emotional process. Therefore as leaders we need to know and control our emotions (i.e. have a high degree of self-awareness) before we can lead others. (Philip Massinger in 1624 said – 'He that would govern others, first should be the master of himself'). A lack of self awareness may lead to inappropriate behaviour, the mis-reading of others and/or situations. Self awareness then is the starting point of personal development, which is a pre-requisite for leadership development." Officer Cadet Andrew Mainwaring

Flexible and responsive

"I believe that officers should react to any and everything that is put in their path; additionally, being able to flex away from the normal SOPs is a function of officers, after all if it was just a case of following orders/work instructions etc then anyone could do it." Flight Lieutenant Jim Garriock

"I feel that flexibility has always been the trademark of the British Armed Forces. A leader that can be flexible can often find a solution and a suitable response to a taxing problem or difficult situation." Officer Cadet Gareth Rees

Mentally agile – physically robust

"This can apply to any situation, at any time and in any place. A leader needs to be able to adapt and this attribute is essential if a leader can attain this adaptability." Officer Cadet CJ Hickmott

"[It] is the only attribute that if a leader is strong in both they should be able to lead in the office and in the field; where as the rest are complimentary skills but arguably not essential." Flight Lieutenant Eddie Dunlop

"…because you could find occasions when you could still be effective as an RAF officer if you lacked any of the other attributes. For example, a single seat pilot might not be very good at leading recruits but he could still be an effective pilot. If an RAF officer lacks mental agility and/or physical robustness, I do not see that they could really be effective on operations today. Moreover a lack of these qualities in the first place is likely to make many of the other attributes unrealistic also." Mr Mark Jewsbury

Warfighter, courageous

"It's the "courageous" bit that stands out for me. Not physical courage, although that is important, but most importantly moral courage. [It is] the willingness to do what's right, no matter how that may be perceived by one's command chain!" Flight Lieutenant 'Sunny' Sardesai

Willing to take risks

"I believe that we can all follow processes as managers, however a leader must have the willingness and understanding to decide when it is appropriate to take risks. If no one takes considered risks then we will never progress. Flight Lieutenant 'Olly' North

"In today's RAF, there is ever more pressure on those in command…to achieve the desired results with ever dwindling resources (manpower, finance, time). Therefore I feel that having the ability to take an assessed risk is vitally important for any leader in today's Air Force in order to meet the Cdrs' intent." Flight Lieutenant Andy Norris

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2010 - OACTU View on Leadership (4c)

"Firstly a leader must understand the 'rules' within which he/she is operating, only then can they safely decide what risks can reasonably be taken. I think some of the best thinking is done and results achieved when the 'rules' are bent a little, so one has to be willing to take the risk of doing so. Reasonable risk taking by a leader also demonstrates to subordinates that they are encouraged to think differently about their contribution and individuals can all make a contribution without being constrained by conventional thinking."
Officer Cadet Jason Lumley

Summary

There was generally a focus on two attributes – 'Flexible and responsive' and 'Mentally agile – physically robust' (capturing 54% of the total vote).

Overall, the attribute 'Flexible and responsive' was voted for by the largest number of respondents. Whether this is a 'self-fulfilling prophecy' because of the style of this survey is unknown. The cadet vote placed this attribute highest with 35% of the vote.

OACTU staff voted the attribute 'Mentally agile – physically robust' highest with 30% of the vote. The reference to operations in the definition, I believe, is the key. It is that which has determined staff views (the majority having recently returned from operations) and they see this as the benchmark against which graduating officers will have to be judged.

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May 2012 - Leadership Essay (5)

Air Vice Marshal Gray CB MC RAF Winning Essay: Decisive Edge

Officer Cadet D J Hopkinson, B Squadron, Initial Officer Training Course 22, OACTU

In 1815, after less than a year in exile on the Island of Elba, Napoleon Bonaparte returned to France and reinstated himself as Emperor. He quickly amassed a new army with the intention of reclaiming France, "before him did ever a man gain an Empire by simply showing his hat?"[1]. After the battles of Quatre Bras and Ligny, Napoleon found himself facing an Anglo-Dutch army under the Duke of Wellington at Waterloo, with a lesser Prussian force he had little knowledge of to the East. The upcoming battle would be the only occasion the two greatest Generals of their era would come face to face. As such it provides an excellent opportunity to compare their leadership styles, and also to assess the effectiveness of the key decisions each made which determined the result of the Battle of Waterloo.

Napoleon Bonaparte had risen through the ranks from a common soldier to arguably the most powerful man in the world. Over this time he developed a unique, individual and undeniably effective leadership style. Although it is often sighted that he was 'not himself' at Waterloo, allegedly suffering 'from a disease called acromegaly… said to induce both torpor and over-optimism'[2], Napoleon was still an effective commander. This can be seen in the comments of his aide-de-camp during the campaign, General Comte Auguste Flahaut de la Billarderie… 'at no period of his life did the Emperor display more energy, more authority or greater capacity as a leader of men'[3] and his men's cries of ""Vive L'Empereur!". An officer in d'Erlon's corps later wrote, "Never had those words been shouted with more enthusiasm"[4]. One particularly effective aspect of Napoleon's leadership was his ability to inspire and motivate the individual French soldier; 'Napoleon… possessed the useful gift of remembering names and faces, and would wander about the camp ground in the evening… to pick out old soldiers from the ranks and chat to them about the dangers they had shared together'[5]. In doing this Napoleon encouraged great loyalty among his troops, being spoken to on first name terms by their Emperor would have been incredible. Even more so would be the idea that they had 'shared… dangers' together and it was this behaviour which made him such an effective leader.

He did at times, however, show poor leadership, most notably with the ineffective use of his subordinates who had experience of Wellington. General Reille stated 'we can beat them by manoeuvring', but was unwilling to tell Napoleon, 'What's the use? He wouldn't listen to us!'[6] . When one considers that Wellington knew that manoeuvre was a weakness for his force, 'Napoleon did not manoeuvre at all… He just moved forward in the old style, in columns, and was driven off in the old style'[7], his dismissive approach to his subordinates advice was unwise. It would have been better to have empowered, rather than belittle them.

Wellington adopted a different style of leadership, more calculating and reserved yet equally effective. Unlike Napoleon, he did not appear to care for his troops on an individual level, 'A strong thread of harshness ran through his character: Paddy Griffiths observed that he 'could be a ferocious commander even by the standards of a ferocious profession in a ferocious age"[8].

However with his great understanding of logistics they were well provided for, 'war was, start to finish, a matter of logistics. It was here that his keen eye for detail was sharpest'[9]. He correctly judged their abilities and

Napoleon Bonaparte.

temperament, stating after the Battle of Vitoria that they were 'recruited from among 'the scum of the earth"[10] yet knowing that he could rely upon 'the traditional stubbornness of the British soldier'[11]. His troops repaid his trust with their loyalty, but it was Wellington's ability to give them victory for which they were willing to pay with their blood. Another effective aspect of Wellington's leadership was his personal bravery. He was to be seen everywhere on the battlefield, particularly where the action was heaviest, a factor reflected in the number of casualties suffered among his 'sadly diminished staff'[12], 'Wellington's exertion was terrific, he was personally present at many of the scenes of the greatest crisis, as proven by the terrible toll among those closest to him during the battle'[13].

Wellington, however, did have some similar failings to Napoleon. When Uxbridge asked the Duke what his plans were for the battle he offered his second in command a sarcastic remark, "Bonaparte has not given me any idea of his projects; and as my plans will depend upon his, how can you expect me to tell you what mine are?"[14]. Realising he was being curt with Uxbridge, he stated "There is one thing certain, Uxbridge, that is, that whatever happens, you and I will do our duty"[15] in a bid to 'smooth things over'[16]. Including his subordinates in his plans would have been a more effective form of leadership. Better informed they could have acted more independently and upon their own initiative and would also

1. Roberts (2001), p.170
2. ibid, p.186
3. id
4. Barbero (2003), p.87
5. Neillands (1994), p.45
6. Barbero (2003), p.73
7. ibid, p.216
8. Holmes (2003), p.xvii
9. ibid, p.88
10. Barbero (2003), p.28
11. Neillands (1994), p.44
12. Llewellyn (2007), p.279
13. Roberts (2001), p.209
14. Barbero (2003), p.18
15. id
16. id

Sir Arthur Wellesley, 1st Duke of Wellington.

have been in a position to continue the fight should anything untoward happen to the Duke.

Napoleon's key decision to use Grouchy in pursuit of the Prussians and Ney to fight Wellington would prove to be critical to the result of the Battle of Waterloo. 'It has been suggested by no less a Napoleonic scholar than Dr David Chandler that the emperor deliberately fielded his 'second team' of marshals in the Waterloo campaign because he desired an emphatically personal victory'[17]. However, as Andrew Roberts states, this is unlikely, 'Napoleon was unlucky with his subordinate commanders in the campaign and moreover made errors in placing them in the posts he did'[18]. When one considers the nature of the two Marshals one cannot help but question Napoleon's motives for assigning each their command. Grouchy was a cautious, 'unimaginative'[19] commander, but one with experience of fighting Wellington. When it came to pursuing Blücher and the Prussians he was too hesitant and slow. He was also unwilling to act upon his own initiative, failing to march to the sound of the guns at Waterloo for fear of incurring Napoleon's wrath having disobeyed the order to pursue. Ney, on the other hand, 'the bravest of the brave'[20], was at times impetuous, rash and down right 'incompetent'[21]. His temperament would have been well suited to driving his troops in a rapid pursuit of the enemy. Instead Ney was selected to oppose Wellington, a man he was ill-suited to fight. Ultimately Ney confused Wellington's troop redeployment as a retreat. Rather than seeking confirmation of what was happening, Ney personally led Napoleon's cavalry in a disastrous unsupported attack. In the resulting action the Anglo-Dutch squares destroyed the French cavalry in an engagement which had an immense impact on the battle. It is interesting to consider what might have happened had Napoleon used his two commanders more effectively. Would Ney have caught the Prussians and prevented their arrival and could Grouchy have defeated Wellington? It is purely speculation, but it is reasonable to assume that the battle could have been an even closer run thing.

17. Roberts (2001), p.171
18. id
19. McLynn (1998), p.181
20. ibid, p.550
21. Ibid, p.617
22. Barbero (2003), p.15
23. Roberts (2001), p.199
24. Roberts (2005), p.57
25. Roberts (2001), p.xxxvii

The effectiveness of Wellington's decision to fight at Waterloo, using that particular area of land, had a decisive affect on the result of the battle. A year earlier Wellington had noted the valley and ridges of Mont St Jean and La Belle Alliance as being ground suitable for fighting a battle in defence of Brussels, 'surveying it with the eye of a professional accustomed to evaluating the lie of the land wherever he found himself and filing away a mental note that it might prove useful in the future'[22]. This allowed Wellington to position his troops in a manner which suited both him and them, 'this was perfect Wellingtonian country… it certainly permitted him to practise his reverse slope manoeuvre of concealing his troops from too much direct artillery fire'[23] and also meant that the enemy could not see who or how many troops they were approaching. Wellington had employed this strategy many times against the French in the Peninsular to great effect. It also gave him a number of buildings in key positions in the valley which he could occupy, fortify, and use to harass any French advance. The chateau of Hougoumont anchored Wellington's army on his Western flank. It was bravely defended by troops of the British Guards Division under Lieutenant Colonel Macdonell. Held throughout the day, the chateau came very close to falling when a number of French troops managed to enter the building via the North gate. In later life Wellington stated that 'the success of the battle turned upon closing the gates at Hougoumont"[24]. Similarly, the farmhouse at Le Haye Sainte was fortified in the centre of Wellington's line and was defended by a battalion from the King's German Legion. Finally, Papelotte on Wellington's Eastern flank offered him another fortification protecting his left. The selection of this shallow valley with its farmhouses and chateau proved decisive.

Napoleon and Wellington each adopted two very different and effective styles of leadership. These leadership traits were influenced by each general's character. It was both these characteristics and leadership styles that influenced their decisions at Waterloo and the effectiveness of these decisions determined the battles result, 'romantic Napoleonic genius versus prosaic Wellingtonian practicality'[25]. It can also be seen that both commanders had weaknesses and at times made poor decisions. It is equally these ineffective decisions which decided the fate of Europe.

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May 2012 - Leadership Training (6a)

An Opportunity To Learn

Flight Lieutenant M R Taylor MSc BA RAF, Head of Exercise Design Team, OACTU

The RAF has a long and proud history as an established and respected centre of excellence for the teaching and instruction of Military Leadership. But what can civilian industry learn from us, and what can we learn from them?

Since Nov 2008, OACTU (Officer and Aircrew Cadet Training Unit) Leadership Instructors have delivered a 4 day leadership course for BAE Systems (BAES). Eleven courses have been run so far, resulting in over 80 BAES personnel receiving leadership instruction. Each course consists of 8 BAES personnel who are selected from a broad range of employment, including higher level management, junior management and those on fast track schemes. In return, OACTU Staff visit BAES Warton and Salmesbury, looking at work practices and how BAES develops and mentors its leaders within their workplace.

This article focuses on the courses run by OACTU and outlines what the courses involve. Simply how do 8 BAES civilians cope with the demands of such a high intensity leadership course; what do they take away and what is in it for the RAF?

One of the aims of the BAES exchange is to show that the RAF, and the Military in general, have moved on considerably from the stereotypical view of tell and do. We are recruiting extremely capable, highly driven individuals whom, with the right instruction, can deliver in the most demanding of environments.

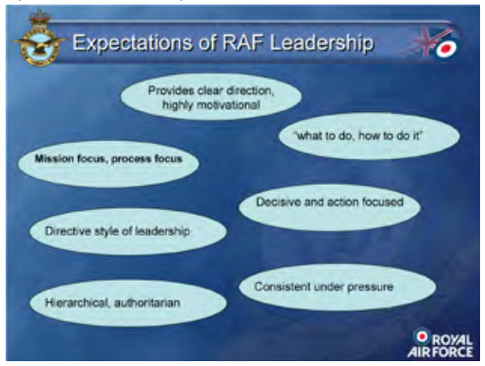
The course

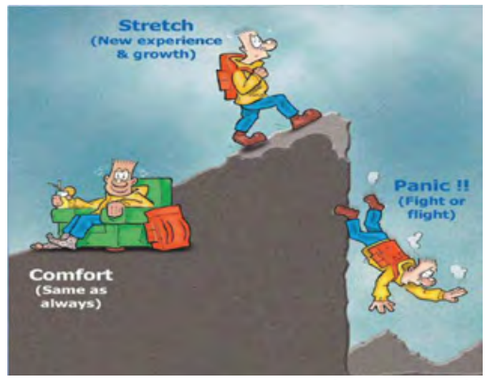
After arrival, the OACTU instructors host the BAES personnel and settle them into their new surroundings. It is usual that none of the BAES staff know each other - not surprising as, at 100,000 personnel, BAES is a global company nearly three times the size of the future RAF.

After an early start, we use existing exercises and lessons delivered to cadets in term 1 of their Initial Officer Training Course (IOTC). After an initial briefing about leadership principles we openly chat about what the BAES staff expect from the RAF and from the course. What becomes apparent is that the RAF is viewed as a very professional and effective, yet dictatorial organisation. What is also clear from these initial discussions is that many of the same problems, such as communication issues, limited resources and manpower are shared by both organisations.

The course is only 4 days long, with 3 of the days being dedicated to practical activity. The aim is to get the personnel involved with practical elements as soon as possible as people learn the most from doing, reviewing then applying what they have learnt. This model, known as the Kolb Cycle, is used early with the IOTC cadets as it engenders effective experiential learning; they need to try something, reflect, and develop a plan in order to move forward and improve on their results. This is why all leadership exercises at OACTU are practical in nature. You cannot train to be a leader without actually doing it; experiencing what it is like and what works for you.

Expectations of RAF Leadership.





Comfort, Stretch, Panic model.

The course is designed to be demanding and to put the BAES staff into stretch, but not into panic. Personnel in stretch learn the most, if a task is too easy no learning takes place, conversely if it too hard the person will shut down and performance will deteriorate.

Pillars of leadership

There are 3 main pillars of leadership: Situational Leadership, the Qualities Approach, and Functional Leadership, also known as Action Centred Leadership (ACL).

Situational Leadership proposes that people possess certain skills that enable them to get a job done in their area of expertise. For example, Sir Ernest Shackleton showed excellent leadership to recover personnel in dire circumstances.

Qualities (Traits) based leadership proposes that people are born with inherent leadership skills. For example, Joseph Stalin had an impoverished background but was noticed for his abilities/traits.

Functional Leadership is based on John Adair's proposal that leadership is a function of balancing 3 areas of need – Task, Team and Individual and that these 3 areas are not mutually exclusive.

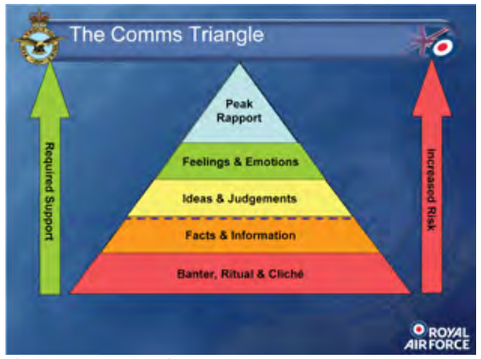
John Adair's Function Leadership model

OACTU uses Functional Leadership as the means of testing a cadet's leadership ability. Cadets are tested against their ability to appropriately balance the 3 areas of need.

During the BAES course we introduce the concept of Functional Leadership and show how the areas of need can increase and decrease in importance depending on the mission. Ultimately, the RAF needs leaders who can show flexibility to switch priorities depending on the circumstances they face whilst trying to achieve objectives.

Team dynamics – getting to know each other

After the initial presentation and discussion, we progress outside to tackle team dynamics and low ropes. Team cohesion is usually stifled initially but, after some close team bonding, the team soon relaxes and starts to work together. Slowly, we introduce communication; a fundamental principle of leadership as taught to the IOT cadets. The importance of effective communication skills is easy to demonstrate during the first activity. The communication triangle demonstrates that any group will start at the lower echelons of communication. Only when confidence grows does a group progress upwards into the higher bands of the triangle, a process which can take many months.



The Communication Triangle.

Low ropes – putting theory into practice

The low rope exercises provide an excellent platform to demonstrate the principle of good communications, effective teamwork and cooperation. The team are split into two groups. The mission is to get both teams to cross each other; it takes time but eventually the two teams will discuss what works and they will then be more able to complete the task. Initial tasks are leaderless, but slowly the requirement for effective briefings and honest and open feedback, or reviews is introduced. We use the principle of SMEAC, the acronym that enables cadets to deliver effective briefs to the group when undertaking missions whilst on IOT. SMEAC stands for Situation, Mission, Execution, Ask Questions and Check understanding.

Time to lead

The group progresses to the Officer and Aircrew Selection Centre (OASC) hangar to undertake a number of activities. The tasks are identical to those used to test potential Officer Cadets. We also use these activities in term 1 of IOT to develop the basic principles of leadership in cadets.

The first exercise is leaderless; the brief is given to all, with little direction or advice from the staff. The group usually realises quickly that the key to success is the establishment of one person as the leader, who can make the decision and control the activity.

The next activity is undertaken with one of the group being placed the lead. Considering they have had very limited leadership instruction the team usually performs quite well, using their experience and problem solving skills to nearly complete all the exercises. After each exercise we introduce more of the SMEAC, so that by the end of the exercises the participants are delivering good briefs, clear enough for all to understand. This is often new to the BAES personnel, who are not used to giving formally structured briefs with little preparation time. However, they often say they will use this type of brief again, modified for their workplace, as it covers the essentials needed when briefing a group.

Review and feedback

The real learning happens during the review (feedback sessions). Reviews are conducted with the staff saying as little as possible and the feedback coming from within the group. OACTU Staff are there to turn the steering wheel whilst the horsepower comes from the participants. The best ideas come from those who were involved. Having your peers tell you face-to-face how they think you performed and what you need to work on is a very powerful tool. The leader takes away 3 points for development, which they can work on for the future. The BAES personnel are asked to record these points on action plans that they can take back to their workplace and reflect upon. One BAES participant commented:

'The OASC exercises were excellent by design. Improved feedback and reflection time to assess the time performance against the theory leadership models underpins the exercises and improves learning'.

OASC Hangar Exercise - Transporting important materials.

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May 2012 - Leadership Training (6b)

College Hall evening

During the evening IOT cadets host the BAES personnel at College Hall Officers Mess (CHOM). Participants are taken on an historic tour of the building, which is always well received. The informal evening allows BAES personnel to get a different perspective from term 2 and term 3 cadets on the principles of leadership and on the training they receive.

Ex Sharp Edge – dynamic leadership

The course also sees the BAES personnel take part in Exercise Sharp Edge on the North airfield at RAF Cranwell. This is a term 1 exercise and is the first opportunity the cadets have to display their leadership skills in a dynamic outdoor environment. The BAES staff observe the cadets first, to see how they perform and how they control their team. They look at their ability to appropriately balance the three areas of need (team, task and individual). During each lead one of the cadets is taken out of the exercise and is allowed to observe proceedings with the instructor. The importance of observation during leadership exercises when not under pressure was commented on by one of the BAES participants.

'The opportunity to observe from the outside the role of a leader and the pros and cons of different approaches is something that really struck home with me and is something personally that I took into the subsequent tasks and will do back in the workplace - it's rare we have the time to observe how other teams / leaders behave in our workplace so this was really valuable perspective.'

The group then undertakes 4 leads, splitting each lead so that everyone gets a chance to be the leader. These leads give the BAES personnel a chance to display what they have learnt in the OASC hangar in a dynamic environment. They often show good leadership, with improved briefings, better control, good communication and good support. On most occasions, team, task and individual needs are appropriately met. The reviews are open and honest allowing individuals to take away tangible development points which they can apply to their everyday jobs. I am always thoroughly impressed by the performance and overall positive attitude of the BAES staff.

Ex Sharp Edge - Carry and move.

The goodbye –time to reflect and put into practice

Finally we return back to the briefing room to conduct course feedback. The BAES staff are always full of praise for the RAF and how it delivers leadership. Their view changes from one where the RAF is a dictatorial/ tell organisation to a one where the RAF delivers first class training and instruction from very competent instructions in an environment that fosters learning and development. The course meets its objectives; showing an outside agency how leadership training is delivered in the RAF, allowing personnel to experience what cadets undertake and, ultimately, for the participants to experience leadership activities with the aim of improving self awareness and taking away development points that can hopefully improve them as a leader.

OACTU instructors learn a lot from the participants as they bring a different perspective on leadership. We become better informed on different management practises and ways of achieving results.

A few comments from BAES participants:

'It was one of (if not the) best courses I've attended in my 10 years in the company and it led to me embedding a number of key points about my leadership approach into my personal development plan for the future.'

'Across the short period of the course I learnt a wealth of techniques which are directly relevant to my role in BAES, and in fact any leadership role. It has given me a confidence in leadership, instruction and understanding the needs of my team in achieving the best outcome on any given task.'

'I am fairly new to management & leadership so learnt a lot from the courses. I intend to use a lot of the tools & techniques in the workplace and change some of my behaviours as a result.'

'I came into the course with what I felt were some quite big uncertainties about my leadership skills and how best to apply them in the company, but through the effective mix of theory / practical exercises and the excellent instruction I have taken away 3 major learning points that I'm confident will stick with me personally for many years to come in my leadership roles.'

Team work on Ex Sharp Edge.

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May 2013 - Leadership Training (7)

Leadership In A Changing World: SDSR 2010 And Leadership Education

Flight Lieutenant Henry Wilkinson MSc RAF - Deputy Squadron Commander Leadership Training Squadron, Officer & Aircrew Cadet Training Unit

"He took his plumed helmet from the ground, and his wife went back again to her house, weeping bitterly and often looking back towards him… so they mourned Hector in his own house though he was yet alive, for they deemed that they should never see him return safe from battle…"

Hector parting from his wife Andromache before battle, Homer, The Iliad, Book VI.

War never changes; it is warfare, the manner in which armed force is employed, that changes[1]. The emotions that Homer attributes to Andromache in The Iliad are no different to those felt by families who have said farewell to their loved ones in times of war in the three millennia since these words were coined. In educating our next generation of officers, the Leadership Training Squadron (LTS) at the Officer and Aircrew Cadet Training Unit (OACTU) must balance the permanent - those skills which all military leaders have required throughout history; with the temporary - those skills that make this generation distinct from those before it. This article concerns itself with the temporary, with specific regard to the Strategic Defence and Security Review 2010 (SDSR 2010).

The average age of Officer Cadets at the RAF College is 27. In extremis, however, some recruits may finish school on a Friday, attest on Sunday and begin Initial Officer Training the next Monday.

The generation of Officer Cadets beating a path to the gates of the RAF College nowadays has an average age of 27, many of them were born after the Cold War had ended; almost all of them have no memory of what the Cold War meant. They may remember being alive during it, but, like the author, it probably had very little impact on their lives. This SDSR 2010 is the first Defence Review to be conducted without the shadow of the Cold War hanging over it[2]. We, and other nations' forces, may field equipment which dates back to the Cold War, but nowadays we are sufficiently removed from it that we should no longer feel its effect[3]. In this context, the SDSR 2010 White Paper identified 7 military tasks[4]:

1. Defending the UK and Overseas Territories.
2. Providing strategic intelligence.
3. Providing nuclear deterrence.
4. Supporting civil emergency organisations.
5. Defending the UK's interests by projecting power strategically and through expeditionary operations.
6. Providing a defence contribution to UK influence.
7. Providing security for stabilisation.

The RAF has a role, large or small, in all of these and its junior officers must be able to lead their men and women in support of these tasks. The current strategic situation of the UK will provide a wealth of challenges for the future RAF; indeed since the SDSR 2010 we have arguably been caught out by events in North Africa and The Levant and have found ourselves responding at short notice to rapidly changing situations. Even in December 2012, few people envisaged that we would be involved in Mali in January 2013.

Nor are these challenges purely geographical. In 2008 a report highlighted a £38 billion "hole" in the Defence budget[5], and this was before the full effects of the recent financial crisis had been felt. Defence Transformation dictates that all personnel, military and civilian, must find more effective and more efficient methods of working. Continuous Improvement is not a passing fad and our cadets will have to be able to analyse their situation critically and develop and implement effective solutions to problems. Questioning the status quo takes moral courage, and tact, and effective change requires effective leadership[6]. There will be another Defence Review in 2015 and even those cadets on a short service commission may experience a further one before the end of their RAF career, as junior officers they must be able to identify, lead and adapt to change.

Thus there is no point in teaching cadets "leadership by numbers", for they will come unstuck quickly when faced with the inevitable unexpected situation. For this reason OACTU concerns itself with teaching our future leaders how to think not what to think. LTS is responsible for developing their theoretical understanding of leadership and ensuring that they can lead in practice.

Theory

"There is no prescription of leadership and no prescribed style of leader."

Defence Leadership Centre (DLC)[7].

Followership was the subject of CAS' Leadership Conference in summer 2012 and it has featured heavily in the Initial Officer Training (IOT) leadership syllabus for some time. Effective change is a "bottom up" process: it is those at the bottom of an organisation, followers in every sense, who truly understand an organisation's business and are best placed to recommend and implement improvements[8]. Constructive dissent has been part of the military lexicon for decades, and it remains as important now as it ever has, and responsible followership uses constructive dissent to inhibit the leader's errors as much as it uses obedience to do what the leader says[9]. To be effective, leaders must be prototypical: representative of the team that they lead, they cannot put themselves on a pedestal and as an organisation we cannot pretend that our leaders are infallible[10]. If a leader believes that they are better than their followers then they are starting off on the slippery slope to toxic leadership[11].

Putting theory into practice is carried out over 3 'Terms' at IOT: Foundation, Development & Applied. Here, in the latter phase, Officer Cadets run a Deployed HQ, where they experiment to develop their own style of practical leadership.

Thus cadets must learn humility, they must understand that they are at the start of their careers and that almost everyone in the Service has more experience and knowledge than they do. This is not easy, we have the honour of educating some of the best and brightest people in our country and many of them may never have experienced failure. The majority may pass IOT first time, but all will face their difficulties and learn the limits of their abilities. A few cadets may even prove to be the brightest stars of their generation, reaching high rank and influencing future Defence Reviews, but they must remain humble and remember that ultimately it is the rank and file of the RAF that gets the job done. For cadets to truly understand their role as leaders, they must put the theory to practice.

Putting theory into practice is carried out over 3 'Terms' at IOT: Foundation, Development & Applied. Here, in the latter phase, Officer Cadets run a Deployed HQ, where they experiment to develop their own style of practical leadership.

Practice

"Theory is Irrelevant when practice points the other way."

Colonel C E Callwell[12].

The method of assessing leadership during IOTC is through a series of Practical Leadership Training Exercises (PLTEs). Increasing progressively in complexity during the course, the 6 PLTEs not only introduce cadets to practical leadership, but also to situations and environments in which they may find themselves for real after graduation. Only two of the 7 military tasks highlighted in the SDSR are not represented by the PLTEs: providing strategic intelligence and providing nuclear deterrence. The remaining 5 are replicated through different scenarios. Exercise ACTIVE EDGE is based around support helicopter operations against UK-based terrorist organisations. Exercise MILAID requires cadets to support Norfolk Constabulary in a search for 2 missing schoolgirls[13], and Exercise DECISIVE EDGE simulates the deployment of a 700 strong Expeditionary Air Wing to a fictitious Eastern European country.

Simulation is an essential part of preparation for modern military tasks[14] and PLTEs provide a challenging, but supportive, environment where cadets are put through their paces both mentally and physically. Importantly there is only one pass or fail test of leadership during the course (Exercise DECISIVE EDGE 1), on other PLTEs cadets are encouraged to experiment without fear of failure so they can develop a natural, effective, authentic leadership style which reflects their own personality. We are not in the business of building leadership robots; we need to develop credible leaders who will inspire personnel of all three services in difficult, dangerous and unpredictable environments. They must show that they can lead by example and they must put their followers' needs ahead of their own.

Cadets have many opportunities to lead outside of PLTEs also: associated duties serving on mess or entertainments committees or organising charity fundraising are far more representative of the bulk of their future work as junior officers than chasing fictional terrorists across the Lincolnshire countryside is and valuable learning abounds in these opportunities. DS are always on hand to guide them in their endeavours and provide coaching, mentoring and education as appropriate. Cadets are under constant assessment as followers as well. Whether at the College or deployed in the field they must embody the ethos and core values of the Service[15] at all times whether they are in command or not.

Summary

"As officers… you shall neither eat, nor drink, nor sleep, nor smoke until you have personally seen to it that your men have done these things. If you will do this for them, they will follow you to the end of the world."

Field Marshal Sir William Slim [16]

The SDSR 2010 emphasised that the only constant of future operations will be their unpredictability. We are now removed from the relative stability of the Cold War by half a generation and it won't be long before the entire cadet body at OACTU is unable to remember it. Now, more than ever, we need a generation of officers who are flexible, open to change and prepared to give, and receive, constructive dissent. They must understand their responsibilities as followers and the important role their personnel will play in the future of the Service. Our cadets may be remarkable individuals, but they must be humble: they must understand that they are not special and that they are no more important than their followers. They will experience future Defence Reviews, they will deploy to unpleasant locations, they will put themselves and their followers in personal danger and throughout all of this they must remain credible, authentic leaders.

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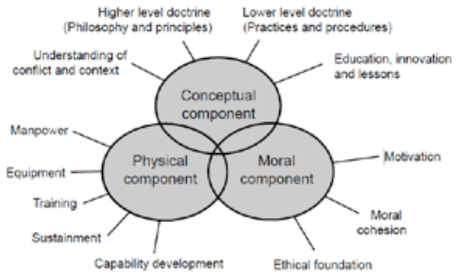
May 2013 - Leadership Training (8a)

A Perspective On Military Education And Leadership: Past, Present And Future

Squadron Leader Dave Stubbs MA RAF - SO2 Air Power, Generic Education Training Centre, RAFC Cranwell

When I was asked to describe the Generic Education Training Centre's (GETC) role in delivering the required military education for our personnel, I recalled that the provenance for the military education requirement could be found in British Defence Doctrine and the 2012 version of the Future Air and Space Operational Concept (FASOC). FASOC states that:

> *"military capability not only depends on the physical component (the means to fight) but also on the moral component (getting people to fight) and the conceptual component (the thought process)".*



The reality, however, is that a relatively small proportion of the RAF's resources are spent developing personnel in terms of the conceptual and moral component. If the spheres in the diagram above reflected their budgetary resources, those representing the conceptual and moral components would be dwarfed by the size of the physical component. Before the current Professional Military Development (Air) [PMD(Air)] construct existed, everyone had to develop a sense of their military utility in the context of their professional experiences, which, over time, encouraged confidence in their own judgement. Indeed, a general trait of reveling in the ability to act without reference to doctrine or planning mechanisms emerged amongst many successful senior officers. However, the 1991 Gulf War exposed a number of weaknesses in this development of unstructured self-reliant thinking. In 1992, a report, which became known as the 'Thompson Report'[1], identified a number of deficiencies in the RAF's ability to plan and execute a conventional air campaign.

The Report acknowledged that the end of the Cold War meant that airmen needed to be prepared to operate in a much wider variety of environments, and identified that our leaders required a more comprehensive understanding of air power doctrine and complementary operational practices. One outcome of the Thompson Report was the establishment of the Air Warfare Centre, at RAF Waddington, in 1993 (subsequently called the 'Thompson Building'). Shortly afterwards, a UK Joint Force Component Headquarters was established to deliver operational planning expertise and to create, through completion of an Air Battle Staff Course, a cadre of personnel to perform battle staff headquarters manage roles and responsibilities. However, the institutionalisation of the supporting academic understanding was still missing.

Unfortunately, the rationale behind the recent changes to the way the RAF educates its personnel has not yet percolated through to everyone in the RAF, and whilst we should applaud the success achieved in recent air campaigns, it can be uncomfortable to witness the way ignorance of well-founded planning processes is occasionally articulated to younger, less experienced Service personnel. Why? Because the idea that you can make it up as you go along, based on applied military judgment, could promote the idea that knowledge of doctrine and process is somehow the remit of the nerd, or the geek. Put simply, it could promote bad practice. Success does not always mean things have been done well. As the resources allocated to the RAF shrink, poorly thought-out operations could prove catastrophic. In this context the 2011 air campaign over Libya was managed in a way that was seen by some as worryingly ad hoc. The Royal United Services Institute (RUSI) assessed that *"several features of this operation show evidence of improvisation, innovation, and good luck, as well as the characteristic military professionalism of the allied forces involved."*[2]

We shouldn't be surprised that ignorance of the full value of military education has a foothold in the RAF. The idea that a small cadre of officers are better equipped to apply military judgment than their peers has characterised British military culture for centuries. Those who that have set out to define a structure to the operational art of warfighting have often been branded as eccentrics, treated with suspicion and marginalised. Senior posts in the British Army were, until the very late 1890s, held by those with connection to property and rank. Commissions could be purchased and, therefore, ability and rank were not necessarily related. In this context progressive intellectuals were often viewed as outsiders.

Sadly, the view that some of our officers benefit little from a military education beyond their personal experience has not been entirely extinguished. It would be unwise, however, for our future leaders to ignore identified processes in order to manage campaigns in a way that relied solely on their ability to improvise and innovate; particularly if, under greater scrutiny, their judgment is found to be wanting. The problem, of course, is that conceptual and moral components have not always been well resourced. Fortunately, things are changing. The Chief of the Air Staff, Sir Stephen Dalton, acknowledged that *"One of FASOC's most important conclusions is that military success is likely to depend on the training and ability of our people to think radically, as much as on the kit that they use".*

As equipment programmes and resources become increasingly constrained it is increasingly important that the ability to define solutions is based on properly structured analysis as well as on applied military judgment. *"A continuing commitment to world-class military education, not just specialist training, will be necessary for the relatively few personnel identified as key to the delivery of the conceptual component of fighting power."*[3]

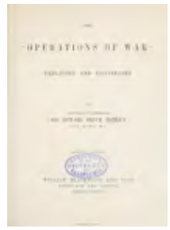
In 2012 RAF Cranwell hosted the Council of Military Education Committees Military Symposium. One of the speakers, Frank Ledwidge (author of *'Losing Small Wars'*) lamented that in recent times commanders who have failed to deliver quantifiable success are rarely held accountable for their failure, and that it can be difficult to persuade senior leaders that they needed military education when they thought they already knew all the answers. He also thought British military education was less effective than its American counterpart. Indeed, he concluded, it is hard not to come to the conclusion that, in the past 2 centuries, amongst the British military hierarchy, an atmosphere of anti-intellectualism has prevailed.

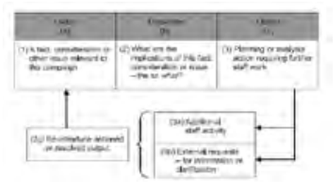
As far back as 1799, Colonel John Gaspard Le Marchant concluded that the inefficiency of British arms in the campaigns of 1793-1794 was a direct result of a lack of professional military education. Eventually, though not without difficulty, Le Marchant persuaded the Duke of York that a military education would prove beneficial in the prosecution of the war against Napoleon. He opened a senior staff training college at High Wycombe in 1799; 2 years later it attracted a Royal warrant to become the Royal Military College. Graduates from the College were known as 'Wycombites' or 'scientific soldiers'. However, the College wasn't popular amongst the Army's hierarchy. For instance General Wellesley, later the Duke of Wellington, hated the idea that Junior Officers would be able to scrutinise his decisions, and was even suspicious that officers with no connection with property and rank would become potential revolutionaries.[4]

John Gaspard Le Marchant

Edward Bruce Hamley

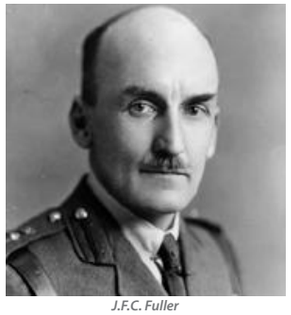
Within the Army's hierarchy, this aversion to scientific soldiers and military academics continued to prevail. When the College moved to Sandhurst in 1820 student numbers remained low; they had barely increased when the College moved to Camberley in the 1860s. Clearly, attendance at Staff College was not a prerequisite to achieve the highest rank in the way it is today. Edward Bruce Hamley became the College's Professor of Military History in 1859. In 1867, he wrote *'The Operations of War'*, a textbook of military instruction in which he devised a way to analyse military campaigns in terms of 'facts' and 'deductions'; something akin to the 3-column analysis format we use today. Hamley became the Staff College Commandant in 1870.





However, when he deployed as commander of the 2nd Division under Sir Garnet Wolseley, in the Egyptian campaign of 1881-1882, Hamley thought his involvement in the war was neither acknowledged nor sufficiently rewarded.

J. F. C. Fuller was another atypical officer. In 1917, as Chief of Staff of the Tank Corps he planned the massive tank attack against the Germans at Cambrai, and went on to plan tank operations in 1918. He envisaged a fully mechanised army by 1919 but such ideas were thwarted when the Germans called for armistice. Nevertheless, in the 1920s, Fuller continued to develop his ideas for the mechanisation of armies, as described in his 1926 book *'The Foundations of the Science of War'*. The book focused on grand tactics and battlefield planning, not field strategy. Fuller thought this new warfare could create 'Strategic Paralysis' in the mind of the enemy. He considered strategy to be a pragmatic science based on a number of immutable principles. Drawing on the writing of Sun Tzu, Clausewitz and Jomini he devised and articulated 9 Principles of War; the forerunner to the 10 principles of war in today's British Defence Doctrine.[5] His proposals were controversial; as much for the tactless and dogmatic



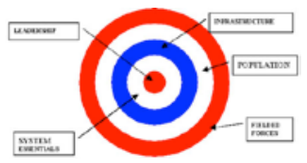
J.F.C. Fuller

manner of their presentation, as for their content. Consequently, his critics sought to diminish him, by overemphasizing his adherence to the 'all-tank' concept.[6]

Unfortunately, many in the Army thought Fuller an unreliable crank. Fuller *"is damned silly",* declared Major-General Sir Ernest Swinton in 1929, *"and has a sort of buffoon reputation"*. This sort of personal attack and the often-negative reaction to his writing probably influenced his decision to retire in 1933. But though he was ignored and sidelined at home, Fuller was lauded elsewhere. On 20 April 1939, he was an honoured guest at Adolf Hitler's 50th birthday parade. It is thought that Heinz Guderain, the German pioneer of armoured warfare, studied Fuller's theories and used tanks, with air power support, to achieve strategic paralysis amongst the Allies in what became known as Blitzkrieg.

Most air power commentators, including the esteemed Sir John Slessor, believed that the nuclear threat marked the end of conventional war.[7] The implication was that air power theory had run its course. However, this type of thinking had to be adjusted when John Warden, a USAAF Colonel, filled the theoretical air power void that had prevailed since the 1930s. Warden was an avaricious reader of military history and thinking. He suggested that air power could target identified vulnerabilities in the Clausewitzian trinity (People, Military, Government) as well as in the enemy's infrastructure, as identified in the work of the USAAC Air War Plans Division, to deliver the necessary strategic paralysis in the minds of the enemy, as described by Fuller. Warden articulated these ideas in the blueprint for the air war campaign against Iraq in 1991. Known as the 'Air Campaign', Warden's clever synthesis of ideas was the forerunner of today's doctrinal air campaign planning process.

John Warden



Many forecasts for the 1991 campaign believed that Coalition ground troops would suffer thousands of casualties in their attempts to eject Saddam Hussein's Iraqi forces from Kuwait. Though not all of the elements of Warden's Air Campaign were used, the air war was a phenomenal success, paving the way for the relatively bloodless victory for the Coalition forces. However, despite the campaign's astonishing success, the 1992 Promotion Board for General Officer rank held mixed views on Warden's suitability for higher command. Some of the Board members

1. Central Mission Support Establishment Final Report, D/DAFSD-1/2/5, dated 14 Sep 92
2. Adrian Johnson and Saqeb Mueen, Short War, Long Shadow: The Political and Military Legacies of the 2011 Libya Campaign, *RUSI Journal, Whitehall Report 1-12*, p. 2
3. Joint Concept Note 3-12 Future Air and Space Operating Concept, September 2012, p. 1-10.
4. Mark Urban, *The Man Who Broke Napoleon's Codes; The Story of George Scovell* (London: Faber and Faber, 2001), pp. 46-48.
5. JDP 0-01, Fourth Edition, November 2011, pp. 2-3 – 2-8.
6. Brian Holden Reid, J. F. C. Fuller's theory of mechanized warfare, *Journal of Strategic Studies*, 1:3, pp. 295-312
7. MRAF Sir John Slessor, *The Central Blue: Recollections and Reflections* (London: Cassell, 1956), p. 635.

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May 2013 - Leadership Training (8b)

claimed that he was *"from academia"*, and that he *"could not hack it operationally"*. Another Board member lamented the way *"the marginal status of air power theorists in the contemporary Air Force"* somehow queered Warden's chances. Warden was not promoted; like Fuller he retired a few years later.[8]

Scientific soldiers have often been vilified or sidelined, and an academic understanding of the environment in which the military operates has not always been something military superiors have appreciated. Ideas from academically-minded military personnel have often been considered unreliable. Those who have had the courage to commit their thoughts to paper have been considered cranks, or disparaged as 'from academia', and their prospects of promotion have often been thwarted. So what has the RAF done to rectify the disparity between the perception of academic warriors on the one hand, and the need for an academic understanding of the capability of air power and leadership on the other?

In July 2002, the Air Force Board Standing Committee (AFBSC) 2* Group directed that a study be undertaken to analyse the RAF's Air Warfare Training (AWT) requirements. The goal of the AWT Strategy[9] was to develop the knowledge, skills and attitudes of personnel to enable them to enhance the RAF's operational capability.[10] The gaps in the training strategy that existed at the time were identified, and in 2006 a plan was developed to address the requirement. Subsequently, the AFBSC 2* Gp endorsed the establishment of a Higher Air Warfare Course (HAWC), linked to a Basic Air Warfare Course (BAWC) through uplifts during Intermediate Level Command and Staff Training. Until the HAWC was replaced by the Senior Officers Study Programme (SOSP) in 2012, these courses provided officers with an understanding of the theory and the applications of air power in order to develop their appreciation of the environment within which they operated.

In 2003, the Officer Cadet Training Review sought to develop officers with a wide-range of attributes, to optimize their involvement in operations. Its finding, in 2004, identified the requirement thus: *"Tomorrow's officer will need to be military-minded and of a courageous and determined fighting spirit, mentally agile and physically robust, politically and globally astute, technologically competent, capable of understanding and managing inter-personal relations, flexible, adaptable and responsive, willing to take risks and able to handle ambiguity"* [11]. Another of the significant features of the report's recommendation was the idea to set up an Academic Defence Studies Department, comprised of academics affiliated to an accredited university. Kings College London was selected to provide the first iteration of academic content delivery, to officer and non-commissioned students at RAF Cranwell and RAF Halton respectively. In 2012 Portsmouth Business School has picked up the baton in this regard.

Yet another initiative, a Review of Officer and Airmen Development (ROAD),[12] was initiated by the Air Member for Personnel in late 2005, to critically analyse the disparate generic training initiatives, in order to improve their overall coherence and alignment. The ROAD identified optimum through-life solutions to develop the essential non-specialist knowledge, skills and attitudes to equip individuals to undertake their responsibilities in the operational and non-operational environments.[13] Specifically, ROAD identified the need for greater coherence in the provision and management of non-specialist education and training. A Generic Education Training Centre (GETC) was established and in 2009 a competency framework for all ranks, the Generic Education and Training Requirement (GETR), was defined. The GETR describes what the Formal Training Establishments should teach, not how to teach. To prevent ad hoc and dysfunctional requirements appearing in the GETR new education requirements are only created when approved by a group comprising (among others) the Directorate of Defence Studies, the Air Warfare Centre, Air Command and the Defence Concepts and Doctrine Centre.

ROAD also identified the lack of coherency in RAF junior officer non-specialist education[14] and recommended that a through-life development path was needed. The outcome of this work is now known as the Junior Officer Development Programme (JODP). Overwhelming evidence was also found to support the need for the Intermediate Command and Staff Course (Air) [ICSC(A)] to become mandatory and be delivered at the point of promotion.

ROAD also noted that the RAF's airmen recruits were also required to have an interest in, and basic understanding of, the core business of the Service: the delivery of Air Power. A review of the educational content required by airmen took place in 2007 and uplift points now occur, in accordance with the GETR, on Command Management Leadership Training (CMLT) courses which are mandatory at the point of promotion and delivered by ACS at RAF Halton. Finally, ROAD noted the limited opportunity for non-specialist training for those who were not selected for the Advanced Command and Staff Course (ACSC) and recommended a SOSP for Wg Cdrs to mitigate this deficiency. SOSP is now linked to the GETR competency framework output standard of ICSC(A). Essentially, therefore, policy, doctrine and the education requirement have now converged. As the 2012 FASOC noted: *"Ultimately, both the moral and conceptual components depend on the quality of people. Given the resource constraints on the physical component, these are the only areas where we can realistically aspire to create a military edge beyond 2020."* [15]

FASOC also alluded to the need to identify leaders with the courage to think and articulate their arguments differently, and also to reward them appropriately: *"This demands institutionalised air power education and a rigorous approach to identifying personnel key to the conceptual component of fighting power. They will also need to be supported by a career structure that prepares, employs and rewards them appropriately."* [16]

Only time will tell if the rhetoric is realised, but the foundations have been laid and the GETC is at the forefront of the plan. It is time for everyone within the RAF to embrace the value of military education.

8. John Andreas Olsen, *John Warden and the Renaissance of American Air Power* (Washington: Potomac Books, 2007), pp. 268-273.
9. AWC/CRAN/1130/6 AWT dated 31 Oct 02.
10. 20070416 – ROAD REPORT – Part 2 Section 3
11. Officer Cadet Training Review, Main Report, October 2004, Executive Summary, p. 2
12. PTC/340/AMP (1145/05) dated 10 Oct 05.
13. 20070416 – ROAD FINAL REPORT
14. The requirement for JOs to 'opt in' to existing CST was contributing to a 2-tier JO corps, with some JOs not undertaking any non-specialist training after Initial Officer Training (IOT).
15. Joint Concept Note 3-12 Future Air and Space Operating Concept, September 2012, p. 1-10.
16. Joint Concept Note 3-12 Future Air and Space Operating Concept, September 2012, p. 1-14.

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May 2013 - Leadership Essay (9)

Air Vice Marshal Gray CB MC RAF Winning Essay

Assess the effectiveness of the opposing commander's leadership and key decisions at the Battle of Waterloo 1815 (Napoleon vs. Wellington).

Officer Cadet R C S M Perry, B Flight, C Squadron, Initial Officer Training Course 32, Officer & Aircrew Cadet Training Unit

Many historians have evaluated the Battle of Waterloo in some attempt to find out why arguably the greatest military commander of all time, with the most modern army of the day, was beaten by an army that was, in comparison, outdated.[1] This essay will evaluate Napoleon and Wellington, compare them directly, and then assess how their qualities expressed themselves, on and off the battlefield, in the key decisions made during the Battle of Waterloo. This essay will also conclude that the main cause of Wellington's victory was an out of character performance from Napoleon and a superb show of tactical leadership from Wellington.

To greater understand the events of June 18, 1815 an analysis of the two commanders needs to take place. Their personalities must be reviewed in order to assess their leadership styles, strengths and weaknesses.

Napoleon was one of the greatest military leaders of all time, but why was he so successful? Napoleon possessed *"…a sparkle and insight that can only be described as breathtaking"*[2] which led to an ability to inspire his men to perform at their fullest capability. His powers of persuasion and influence over the everyday soldier, through to his Corps commanders, were noticed by all, including his opposition; Wellington said *"that his* [Napoleon's] *presence in the field was worth 40,000 men"* [3]. Furthermore, it cannot be denied that Napoleon was a military genius. He was somebody who revolutionised warfare through *"his sheer mastery of the military profession"*[4]. His concepts of envelopment, speed and mass mobilisation won him numerous conflicts from 1796 onwards. When his strategic brilliance was coupled with his ability to *"speak to the soul of his officers and men"*[5] his armies moved with unparalleled vigour and determination.

However, by 1815, there was a change in Napoleon. There was no question that he was still *"a giant surrounded by pygmies"*[6] and had the potential to beat any army on the day, but weaknesses were appearing. His early successes had made him over-confident and arrogant. This was shown in a tactical decline from the Battle of Wagram onwards, where he used brutal, hard-fought frontal assaults rather manoeuvre around a central point from earlier conflicts.[7] His arrogance was made clear with one comment to his generals on the morning of June 18, 1815: *"Because you've all been beaten by Wellington, you consider him a great general. But I tell you that he's a bad general, and it* [victory] *will be as easy as having breakfast"*[8].

Also, Napoleon was not in good health. It has been suggested he was suffering from a glandular disorder as well as haemorrhoids, and so the ever-present, enthusiastic general of Austerlitz was no longer to be seen.[9] One of his men commented on his appearance on the morning of the battle as *"…without colour, almost waxen"*[10]. Both his poor health and over-confidence would end up being decisive factors in his defeat.

On the other hand, Wellington was a man in peak physical condition; years of *"hard service and simple living had strengthened his constitution and general good health"*[11]. This meant his activity around the field was much higher than that of Napoleon's, and this impacted on his victory.

His time in India and the Iberian Peninsular had given him recent battle experience, which resulted in his outstanding physical fitness, high standards and professional bearing. India, in particular, had moulded him into the man he was in 1815 '… burgeoning his latent talents as a soldier, administrator and diplomat.'[12]

Geoffrey Wootten makes a thorough comparison of the two commanders;

> *In personality, temperament and outlook the two men were as different as chalk and cheese. Napoleon inspired by sheer charisma… Wellington led by cool ability and competence. Napoleon elevated strategy to an almost intuitive art form; Wellington developed a style that depended on analysis and logic. Napoleon would throw troops in by the thousand… Wellington would hoard his meagre army and begrudge improvident loss of human life.*[13]

Wellington's logical style of command and his *"sure-handed application of the principle of economy of force"*[14] were possibly the most important factors in making him tactically brilliant. His tactical ability, particularly in defence, would play a decisive role in the outcome of the Battle of Waterloo.

With an understanding of Napoleon and Wellington's qualities, the key decisions of the two commanders at the Battle of Waterloo can be analysed as to their contribution to the outcome. Before the campaign had started, both Wellington and Napoleon had allocated their subordinates for the conflict to follow. Napoleon was *"supported by a staff that was less than perfect for the task ahead of it"*[15]. The generals below him had either very little battle experience or a poor track record, particularly against Wellington in the Peninsular Wars. This put a heavy reliance on Napoleon's ability to inspire a dogged performance from the rank and file[16]. Under normal circumstances this was his strong point, which is why he had felt confident in choosing the commanders he did. But, inspire was not something he could do affectively at Waterloo, due to his poor physical condition and lacklustre attitude: *"Napoleon [on the day] was sick, sleepy, and sometimes overcome with a degree of lethargy that left his staff despairing"*[17]. As the battle unfolded, the choices Napoleon made in his staff, and his lack of presence and influence, came into fruition as his commanders, such as Ney, d'Erlon and Reille, led ineffective frontal assaults on the British suffering huge casualties to little or no gains.

Wellington did not have the luxury of choice with his subordinates, but *"the vagaries of the British appointments system had provided him with… a good British command"*[18]. However, there were certain decisions of influence made by Wellington. Firstly, his placement of his officers was superb, which meant that he could focus on control of his weaker commanders and employ effective economy of force. In Hougoumont, a pivotal position in the outcome of Waterloo, Wellington had placed 1,500 to 2,500 men under the command of Lieutenant-Colonel James MacDonnell. When questioned on whether this number would be enough

1. Faulkner (2012), p. 3
2. Wootten (1992), p. 11
3. Chandler (1980), p. 32
4. Chandler (1980), p. 39
5. Chandler (1980) p. 39
6. Chandler (1980) p. 41
7. Wootten (1992), p. 11
8. Barbero (2005), p. 57
9. Wootten (1992), p. 10
10. Barbero (2005), p. 67
11. Chandler (1980), p. 43
12. Chandler (1980) p. 43
13. Wootten (1992), p. 14
14. Faulkner (2012), p.18
15. Wootten (1992), p. 13
16. Wootten (1992), p. 13
17. Faulkner (2012), p. 18
18. Wootten (1992), p. 14

to hold Hougoumont, Wellington replied *"…I've thrown MacDonnell into it"*[19]. The French lost 5,000 men in the struggle for Hougoumont, and over the course of the day attacked it with over 20,000 men, almost the whole II Corps; the British lost only 1,500 men and defended it with no more than 3,000.[20] It was by using his competent commanders in vital positions that Wellington was able to deploy a very effective defensive position with the minimum amount of manpower to complete a task.

The strategic positioning of Wellington's troops at Waterloo was also influential to his success. Placing his troops over the ridge of Mont St. Jean, with the settlements of Hougoumont, La Haye Sainte and Papelotte to his front, Wellington was able to slow the advance of the French and stop the effectiveness of their artillery fire. The ridge protected his men from direct fire, and the settlements acted as 'wave-breakers'[21] for any French advance. Furthermore, Wellington's activeness on the battlefield meant he could influence events across his position directly. *"Wellington was alert, active, ever on the move, exercising almost minute-by-minute control of the battle"*[22]. This control was vital as Wellington had few reserves and this meant victory in the small tactical skirmishes would win the battle. In the closing phase of the battle, Ney ordered a charge against the right-centre of Wellington's line. This point had been targeted all day and was on the verge of breaking. 'Wellington, as ever, was present at the crisis point, and it was he who gave the order…*"Stand up, Guards! Make ready! Fire!"*[23], this control from Corps to Battalion level, was possible due to Wellington's fitness and led to British success at vital points during the battle. At a tactical and strategic level Wellington was superior to Napoleon at Waterloo.

The British victory at Waterloo was due to an out of character performance from Napoleon and a superior tactical performance from Wellington. Napoleon's over-confidence and arrogance had led him to poorly choose his subordinate commanders and underestimate his opponent. In turn, this led to a poor strategic battle plan and poor decisions at the tactical level from his subordinates leading inflexible frontal assaults. Also, Napoleon's lack of energy and influence, caused by his poor physical health, had a part to play in defeat. By not having the capacity to inspire and influence his rank and file, Napoleon could not make up for the misgivings of his subordinates.

On the other hand, the previous points should not detract from the brilliant showing of Wellington and the British at Waterloo. Wellington's defensive strategic and tactical superiority was a deciding factor in the victory over the French; effective economy of force is the best example of this. Furthermore, Wellington's omnipresence on the battlefield meant he could control how the battle was to be fought, which was a direct outcome of his good health and physical fitness. In his own words, even Wellington believed his influence was vital to victory at Waterloo: "… [Waterloo was] *the nearest run thing you ever saw in your life… By God, I don't think it would have been done if I had not been there"*[24].

19. Faulkner (2012), p 18
20. Holmes (2011), p. 40
21. Holmes (2011), p. 40
22. Faulkner (2012), p. 18
23. Faulkner (2012), p. 22
24. Roberts (2005), p. 120

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May 2013 - Leadership Training (10)

The International Junior Officer Leadership Development Programme (IJOLD)

Flying Officer Adrian Cooper RAFR

The International Junior Officer Leadership Development Course (IJOLD) is a multi-national training programme for international air reserves that looks to enhance international co-operation, learn about leadership and establish new contacts; it is organised under the umbrella of the Committee on Leadership Development of the International Air Reserve Symposium. The course has been running for 18 years and is usually held at the host nation's officer academy. In 2013, by kind permission of the RAFC Cranwell Commandant, IJOLD will take place at RAFC Cranwell (22 - 29 June 2013), using the expertise and facilities of the OACTU and RAF Leadership Centre to provide a programme that combines leadership with heritage and culture, and the aim of sharing topics to help forge world stage unity; this will provide a better understanding of each other's unique professional military education. Last year, IJOLD was hosted by the German Air Force at their Officer Academy at Fürstenfelbruck, near Munich in Bavaria. Three members of the RAuxAF participated and the following article, written by Fg Off Adrian Cooper, offers an insight to the utility of the week-long course.

IJOLD is an international programme for Junior Officers belonging to the Reserve Air Forces of a number of different countries and allows them to get together and exchange ideas and experiences, and to further their appreciation of how Reserve Forces in other counties operate. One of main aims of the week-long IJOLD programme is to encourage networking and build friendships – after all, the junior officers of today can become the senior officers of tomorrow. With the modern emphasis on Coalition and Multi-National military operations, these foundations of friendship and mutual understanding will doubtless pay dividends in the future.

Working up a sweat at the German Rangers School

Each year, one of the participating nations acts as host for the IJOLD event. Next year, it will be the turn of the Royal Air Force, with the visiting Junior Officers all congregating at RAF College Cranwell. However, this year IJOLD was hosted by the German Air Force at their Officer Academy at Furstenfeldbruck, near Munich in Bavaria, and I was one of 3 Junior Officers from the RAuxAF fortunate enough to attend. There were also junior officers from Canada, USA, Germany, Denmark, Holland, and Switzerland participating. The constellation of trades and specialists represented by this international mix included Force Protection, Intelligence, Artillery, Air Engineering, Logistics, Air Movements, Political Advisers, IT Security, Police, Medical, Public Relations, CIMIC, Education and Admin/HR. In addition, there were 3 C17 pilots, one C130 pilot, one C38 communications aircraft pilot, and an F16 pilot, all from US Air National Guard units. Some of these reservists are part-timers like me, and some of the others are full-time Reservists.

The week-long IJOLD programme had a fascinating mix of activities. Some of these were classroom-based lectures on interesting subjects about the host nation, Germany. These included an outline of the modern-day Luftwaffe's officer training programme, and a thought-provoking presentation on "How the German Military sees itself", i.e. the role of the post-WW2 German military living in the shadow of past German military history. In addition to lectures, the IJOLD students had a number of outings. Several of these were 'tourist' in nature, and included a visit to King Ludwig II's summer palace on an island in the middle of Lake Chiem. However, even this had a serious side to it, as it was here in the early post-war years that representatives from the Allied Powers met to draft the constitution for the new Federal German Republic which came into being in 1955. The wording of the constitution was specifically phrased in such a way that it would constrain the German Armed Forces from repeating the unfortunate episodes of 1914-1918 and 1939-1945.

On another day, the group visited Neuberg Air Force Base where the Luftwaffe is just starting to convert its JG74 Fighter Wing to Eurofighter. In addition to being given an up-close tour around one of the Eurofighters, the Luftwaffe had arranged for examples of every type of aircraft in their inventory to be lined up on the apron so that we were able to inspect them in detail and chat to the aircrew. We also visited the Eurofighter simulator complex, where several of the pilots amongst us tried their hand at flying a Eurofighter rather than a C17. Finally, we watched a demonstration QRA scramble of 2 Eurofighters.

Perhaps the most enjoyable day for me was when we visited the German Rangers School training area in the foothills of the German Alps. Here, our group was divided up into several teams and we undertook a number of practical leadership / team tasks that would be instantly familiar to anyone who has undertaken Initial Officer Training and Leadership Development exercises.

In addition to rescuing a plastic tube from the traditional circle of shark-filled custard without touching the ground, and with only two ropes to assist us, we also found ourselves clambering over an interesting confidence course that traversed a wooded area, and then shuffling our way across suspended cables strung about 50 feet above a ravine, some 200 metres wide.

Across the Ravine!

Of course, it would be most disingenuous of me to pretend that holding a week-long event for Junior Officers in Munich, just prior to the commencement of the world-famous Oktoberfest beer festiva,l would not involve some more 'relaxed' pursuits in some small measure. And thus the IJOLD students also had an opportunity to enjoy a typical Bavarian meal at a hostelry in the centre of Munich, which just happened to be situated immediately opposite the famous Hofbrauhaus beer hall.

All in all, I found it to be an exceptionally useful and valuable week which enabled me to forge a number of international friendships and has opened my eyes to the wide range of key roles that reservists now hold across the various participating nations. This was very much brought home to us half-way through IJOLD, when the shocking ambush and murder of the US ambassador in Libya took place. That same afternoon, 3 of our US colleagues, all full-time reservist intelligence analysts were immediately recalled to Ramstein Air Base in order to fly straight out to the Middle East that same evening, to assist with the intelligence assessment of the situation.

To me, this is a clear sign that the Whole Force Concept now embraced by a number of nations, including the UK, means that Reservists will have an increasingly important role in the Armed Forces in future.

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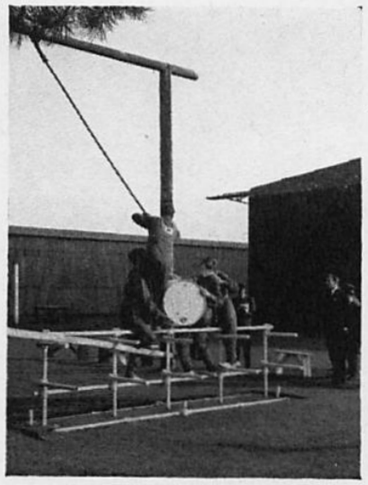
Summer 1963 - Recruiting, Selection & Training (1a)

TRAINING AT CRANWELL 1963

This article has been prepared — largely from material already published elsewhere — to give a general picture of the R.A.F. College training pattern at this time. We hope that this will be of interest not only to past and present Cranwellians but also to our many other subscribers.

This training pattern is at present under review. Whatever the outcome of this review, the Henlow merger must affect the look of the programme.

This seems, therefore, an appropriate moment to sketch in the present picture "for the record." To help give a rounded report, the article opens with an account of the work of the R.A.F. Selection Board.



THE ROYAL AIR FORCE SELECTION BOARD

A suitably qualified young man seeking a cadetship at Cranwell or Henlow has more than one preliminary hurdle to clear. At the Officer and Aircrew Selection Centre, Biggin Hill, he submits to a series of aptitude and medical tests and a filter interview. If successful, he moves on to the R.A.F. Selection Board at Cranwell, which is required to assess and report on his personal qualities and training potential. This Board does not in fact "select" candidates, but grades them and reports on them for the Air Ministry Awards Board. The Awards Board — the ultimate selecting authority — has the Director of Manning as its Chairman and includes among its members the Cranwell and Henlow Commandants. The President of the R.A.F.S.B. attends to advise.

At Selection Board stage, a candidate spends three and a half days at Cranwell during which he tackles — individually or as a member of a team — a variety of situations, all carefully chosen and presented by experienced officers. These situations include paper and pencil tests (designed to give pointers to his intelligence and general "awareness") and graded indoor and outdoor group exercises (used to assess personality, the degree to which he can use whatever native wit he has and the impact he makes on his contemporaries).

The candidate's first day at Cranwell is a Sunday. He attends the cadets' church parade, tours the R.A.F. College and sees films of life at Cranwell and Henlow. The Board procedure starts on the Monday morning. Each candidate is interviewed by the President, by a Headmaster (primarily, though not solely, concerned with his educational potential) and by the Wing Commander and Squadron Leader who will spend the remaining two and a half days with his team.

The young man's final ordeals are delivering a lecturette to his team and performing a series of individual tests.

When the candidate has departed, each officer with him prepares a report covering his performance, the impression he left and his potential for the College of his choice. These reports, together with those of the President and the Headmaster, are considered in conference. The candidate is then given a grading and his final report is raised.

Each year, 120 Cranwell places and 60 Henlow places are filled from about 1,000 candidates passing through the procedures of the R.A.F. Selection Board.

When each of the 120 young men reaches Cranwell, his training life centres on three major commitments, viz. officer training, professional training (as pilot or navigator or for commissioning in the Secretarial or Equipment branches or in the R.A.F. Regiment) and academic training. Together, they give him a very full programme for his nine terms.

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Summer 1963 - Recruiting, Selection & Training (1b)

CADET WING TRAINING

The new cadet spends his first few days in a bewildering round of interviews, " kitting," etc. The Cadet Wing (four squadrons, each sub-divided into flights) begins his planned programme of formal officer training in the lecture room and on the drill square.

During his first three terms, he spends three hours each week on foot drill to raise his standard of discipline and bearing. He is expected to be ready to take part in full ceremonial parades from the start of his third term.

The Sovereign's Squadron has the honour of bearing the Queen's Colour and each term the squadrons contest keenly for this distinction through competitions in physical fitness (Knocker Cup), drill (Ferris Trophy), and sport (Chimay Cup). Great emphasis is placed on the cadet's physical fitness and he does regular physical training during his first two years. This training is extended to include toughening exercises, swimming, life saving, dinghy drill and parachute training.

In his first term, too, great attention is given to ground defence training. The cadet is taught to use small arms and radiac instruments and instructed in tactics and defensive organisation. He visits units of the other Services. The general aim of this training is to give him a sound, practical understanding of the problems involved in defending airfields and R.A.F. installations against all modern forms of attack.

At the end of his second term, the cadet will join a " Leadership Camp," probably in the Troodos mountains of Cyprus, designed to test his leadership qualities. He spends a fortnight (under the overall supervision of the R.A.F. Regiment) undertaking progressive exercises in map reading and day and night movement over rough ground. The camp ends with a three day escape and evasion exercise.

Throughout his stay at Cranwell, the cadet is expected to learn something of the organisation and the administrative system of the Royal Air Force and the other armed Services, Air Force Law, R.A.F. customs and traditions and Service writing conventions. During his time as a senior flight cadet — whether or not he is promoted Under Officer or Senior Under Officer — he takes an active part in running his squadron, upholding discipline in the College and joining in the routine duties normally required of a junior officer.

Cadet Wing aims at a gradual transition in the cadet from the discipline of obedience to the responsibility of command.

FLYING WING TRAINING

Note : Cadets who will serve in the Equipment or Secretarial Branch or the R.A.F. Regiment would instead be undergoing a course of professional training from the end of the fourth term.

From the start of his second term a cadet flies Chipmunks one day a week. He is given elementary instruction and, if he is to be a pilot, will fly solo. This flying is not intended as a pilot grading scheme but it does enable the future pilot to gain some 40 hours valuable flying experience as well as giving him the pleasure of flying in the early days of his course. Even the cadet not intending to become a pilot enjoys and benefits from dual flying in the Chipmunks.

THE PILOT

Late in his fourth term, he is introduced to the Jet Provost in the Flying Wing Ground School. The introduction leads in most cases to a pleasantly ripening friendship in the Flying Wing squadrons (two of which are based at Cranwell and two at Barkston Heath). In his fifth term the tempo of his flying training is increasing and he will fly solo after seven to eleven hours instruction. He will then have a period of closely supervised consolidation training on the airfield circuit.

The flying training syllabus aims at natural progression. More than half the total of the 170 hours training in the syllabus is devoted to general handling which includes circuits, aerobatics, low flying and learning the art of getting the best performance possible from the aircraft under varying conditions. Throughout, emphasis is placed on instrument flying. As the cadet passes practical instrument grading tests in successive terms, he is qualified to fly solo in progressively more demanding weather conditions. In his final term he is awarded a professional pilot's instrument rating. Map reading and the use of radio and navigational aids are taught and practised. Towards the end of his course, the cadet does formation flying and fourteen hours night flying.

By the end of his ninth term, the cadet has usually about 220 hours flying experience and has finished his *basic* flying training. On the day before he graduates, he receives his wings. He will then (as a Pilot Officer) be posted for *advanced* training on either the Gnat or the Varsity — depending on which Command he is to join for his first operational tour.

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Summer 1963 - Recruiting, Selection & Training (1c)

THE NAVIGATOR

If a cadet is destined for the General Duties Branch as a navigator, he, too, will do only his *basic* professional training at Cranwell. At the start of his course, he will spend more time in the lecture room and less time in the air than his pilot colleague.

The three stages of his basic navigation training in the air (in Valettas based at Cranwell) will cover 174 hours spread over four terms. The first stage includes ten to twelve sorties, each lasting between two and four hours during which the cadet learns to use simple topographical maps. The second stage begins with the cadet navigator (under instruction) making no use of ground or visual aids but relying on radio and radar. After four or five sorties, the cadet continues his training but without the presence of his instructor. Stage three introduces astro-navigation.

Having completed his basic training, the cadet is awarded his brevet and moves to the Advanced Training School as a Pilot Officer.

TUTORIAL WING TRAINING

Throughout his stay at Cranwell, the cadet also pursues a fairly intensive and extensive course of academic studies. This is guided mainly, though not solely, by officers of the Education Branch who work under a civilian Director of Studies.

The current academic syllabus is not governed by the immediate practical requirements of the service. The Cranwell graduate is expected to reach high rank where he will need a trained orderly mind as well as sound professional training and quick reflexes. Thus, the present syllabus was designed some three years ago to deepen and extend the education gained from school and to enable the cadet with the ability and the inclination to reach degree standard in sciences or arts. To this end, the cadet may join the " A " (general) stream, the " B " (science specialist) stream or the " C " (arts specialist) stream.

The general stream provides a balanced course in the sciences and the arts, time being divided between them in the ratio 3 : 2. A cadet studies physics, mathematics, aerodynamics, thermodynamics and electronics on the science side. His studies on the arts side must include English, war studies and one optional subject of the seven available. Some cadets in the "A" stream take external examinations, e.g. additional G.C.E. "A" level examinations or linguist or interpreter examinations.

The science specialist in the " B " stream prepares for the examination for Associate Fellowship of the Royal Aeronautical Society. He will take Part I of this examination (physics, pure and applied mathematics, aero and thermodynamics) at the end of his fourth term. In his final term he will take Part II (aerodynamics, meteorology, radio engineering).

The " C " stream arts specialist prepares for the University of London B.A. General Degree in three subjects — war studies and two others. He will take the examination in one part during his ninth term.

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March 1997 - Aptitude Testing (2a)

ROYAL AIR FORCE PILOT APTITUDE TESTING

Squadron Leader R W A Woodhead (Retd) RAF, Head of Aptitude Testing (78B Entry) - Directorate of Recruiting & Selection(RAF)

RATIONALE

If all trainees achieved a satisfactory standard, or the cost and inconvenience of failures were unimportant, there would be no need for pre-selection. But when training costs matter, every failure counts.

Pre-selection is carried out for the majority of jobs; the extent depends on the risk and significance of failure. It usually includes assessment of academic and medical records, motivation and potential. The aim is to reveal candidates' trainability based on past form and natural ability. Natural ability is synonymous with aptitude. Aircrew aptitude is the innate potential to develop high performance skills. Aptitude testing is the scientific measurement of human ability. Pilots require rare and complex skills; training them is one of the most costly regimes in the world and the need for efficient pre-selection is self-evident. The RAF and many other air forces have used both aptitude testing and grading, either in real aircraft or simulators, as selection tools. RAF aptitude testing has been proved to be just as reliable as grading and vastly more cost-effective.

HISTORY

The RAF has been measuring aircrew aptitude since the early 1940s when a high pilot training failure rate lead to an invitation to Professor Bartlett of Cambridge University to prepare some short tests for aviation candidates. The subsequent, spectacular 50% reduction in pilot training wastage was attributed largely to the tests developed by his team of psychologists. The testing principles that were then instituted have, with the advent of new challenges and new technology, been progressively developed by RAF and MOD psychologists. The RAF aptitude testing system was placed on computers in 1985-1986, and a new system was installed in 1991. In 1995, a major software and database update was completed to provide an enhanced test development capability to carry RAF aptitude testing into the next century.

SOURCES

RAF aptitude tests originate from 2 different sources. The first group were converted from paper/pencil or mechanical form to computer format in 1985-86. Extreme care was taken to retain the nature of each test, to preserve its productivity. The second group of tests were purpose-designed by MOD psychologists for computer operation.

PILOT TESTS

The RAF Pilot 5 test battery currently comprises 2 psychomotor (or coordination) tests (SMA and CVT), a spatial reasoning test based on aircraft instruments (INSB4), a speed/accuracy test (VIGILANCE) and a short-term memory test (DIGIT RECALL). Readers who were tested in the pre-computer era will remember SMA as a booth with stick and rudder pedals and the task of 'keeping the dot in the middle'. CVT was a rotating drum over which candidates had to control a movable contact arm along a row of dots. INSB4 involved interpreting flight instruments, either to answer questions or to choose from a selection of aircraft silhouettes. These 3 tests have retained their good predictive properties over many years. VIGILANCE and DIGIT RECALL were introduced to enhance productivity in April 1993. They measure attentional capability and short term memory respectively. In the pipeline are further tests to measure spatial awareness, mental speed and learning rates. All the tests aim at assessing the 'Holy Grail' of international aptitude testing research - capacity, since it is lack of this elusive quality that is most frequently quoted as the cause of failures in training.

OTHER SPECIALIZATIONS

Test Batteries have been developed, and are in executive use at Cranwell, that predict for RAF Navigators, Air Traffic Controllers, Fighter Controllers, and NCO Aircrew (Air Engineer and Air Loadmaster), Army Air Corps Pilots, Naval Pilots and Observers and Civil Police Air Observers. The system is sufficiently flexible to allow differences in Pilot role (RAF, RN, Army, fixed and rotary wing) to be catered for according to individual customer validations, training regimes and end-of-course skills requirements.

THE PSYCHOLOGICAL PERSPECTIVE

Scoring

The computer system automatically marks the tests, derives composite scores which optimise the productivity of the individual tests and prints out a summary of results. Raw Scores are standardized on a Stanine (1 to 9) Scale, for ease of interpretation and comparison. The system is flexible and it is easy to change from Stanines to, for example, T-scores. The norms used are from large samples of candidates' results. Standardized scores may be weighted according to the emphasis needed to optimise the productivity of each test within a given battery. RAF candidates are permitted 2 attempts at the Pilot and Navigator Batteries, provided a year elapses between the attempts. The better individual test results from the 2 attempts are used. This policy follows the Guidelines for Psychological Testing recommended by the British Psychological Society's Steering Committee on Test Standards (May 1989).

Validity

A valid aptitude test statistically predicts a relationship between measured ability and training outcome for similar people. The RAF pilot aptitude tests are validated by the occupational psychologists of the Defence Research Agency. Test results from a sample up to 200 candidates who entered training are compared with their performance through the training system. The procedure has been followed at regular intervals over the last 50 years and is the basis for the continual programme of test development that maintains the productivity and, thence the reputation of the RAF's aptitude testing methods.

Test Conditions

The British Psychological Society provides guidelines for test conditions and these have been

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followed in the purpose-build testing facility at Cranwell. The test room is sound resistant and temperature controlled. The lighting is designed for minimum screen interference. Each of the 44 test stations is identical, each computer screen is adjusted to common settings of contrast, gain and colour. All candidates are given the same pre-test verbal briefing. The degree of standardization is excellent and there is a justifiably high level of confidence in both the scores and the statistical analyses resulting from the data gathered at Cranwell.

The Domain Approach to Aptitude Testing

Current thinking among occupational psychologists is to move away from single tests, each chosen to identify a specific aptitude, towards groups of tests, scored as one, measuring within domains of aptitude. The domains of interest are chosen to represent those candidate characteristics which have been shown to be needed as a basis for successful training. Typical examples of the domains relevant to piloting are Psychomotor, Spatial Awareness and Memory. This approach is already apparent in the Critical Reasoning and Spatial Batteries, each of which is scored as a single entity but combined with others to optimise productivity for a particular skill. The domain approach avoids the inflexibility of job sampling (a good example of job sampling is the use flight simulators to grade candidates) and is easily and quickly adaptable to react to changes that may occur to the job itself (such as developments in cockpit technology) which may require different skills in the future.

THE TESTING SYSTEM

In parallel with aptitude test development the RAF has developed a computer-based system to administer the tests which can process 44 candidates simultaneously. The computer testing system is at least 4 times more manpower-efficient than the manual procedure. A staff of 12 was required to administer a full board of RAF candidates during the paper/pencil/mechanical era, today 3 can test 44 candidates simultaneously, twice daily.

SERVICE CANDIDATES AT CRANWELL

The Fleet Air Arm, Royal Marines and Army Air Corps send all their aircrew candidates to Cranwell to be tested. University Air Squadron Volunteer Reserve members may also apply to be 'tested in advance' of commitment to a Service career.

Test station - His first step to the cockpit

NON-SERVICE CANDIDATES AT CRANWELL

UK Police Forces send Air Observer candidates to Cranwell for aptitude testing. Civil Aviation pilot candidates, or candidate sponsors, may apply for testing at Cranwell through the Guild of Air Pilots and Air Navigators (GAPAN). Finally, applicants for flying scholarships are tested at Cranwell on behalf of the following sponsors: Royal Navy, Royal Air Force, The Air League, The Barrie Smart Memorial Award Scheme, The RAF Benevolent Fund/International Air Tattoo Flying Scholarship for Disabled People (Douglas Bader Scholarship) The Philip Sassoon Flying Award Scheme, The Air Cadet Pilot and Navigator Training Scheme

THE COMMERCIAL PERSPECTIVE

From a commercial point of view the RAF testing system is very attractive. It contains reliable and validated tests; large numbers can be tested simultaneously; marking and scoring are automated, the management software is adaptable, and is portable to other computer hardware, many of the tests can be translated into other languages without altering their nature, test development is on-going and new tests can be made available as reliability and validity are established and the system is very cost-effective. It is not surprising that the tests and system are regarded by some airlines and other Air Forces as being at the cutting edge of aptitude testing methods, worldwide. There has been a consistently increasing demand from overseas customers wishing to acquire the RAF system for their own use and a renewed interest from UK based civil aviation companies in making use of the testing facility at Cranwell.

The United Kingdom Secretary of State for Defence retains all rights to the tests under Crown Copyright and licences independent use of RAF tests through the MOD Intellectual Property Rights Administration. The agency for overseas sales and installation of the RAF aptitude tests and system is Psytech Ltd, who use their proprietary Testing Environment Kernel System (TEKS) as the host environment, through MS-Windows 3.1/95. TEKS has all the capabilities, described above, of the RAF CBT system at Cranwell plus the advantages of freeing end-users from the need to purchase special computers and allowing full data integration into existing human resources databases. Psytech Ltd also supply the special purpose hardware for the RAF's psychomotor tests in accordance with MOD technical specifications. TEKS is proven in use with other Government (non-aviation) departments and has been chosen as the host environment for a specially designed battery of aptitude tests for nationwide use by University Air Squadrons. Organizations so far licensed to use the tests for selection of pilots and, in one case, air traffic controllers are Turkish Air Force (in Turkish), Dutch ATC selectors (in Dutch), * Royal Saudi Air Force, * United Arab Emirates Air Forces (in Arabic), Royal Air Force of Oman, Hong Kong Government Air Service, *Malaysian Airline System, * Republic of Singapore Air Force, Qantas, * Royal Norwegian Air Force, British Airways and * Indonesian Air Force (currently negotiating licence).

* installed and maintained by Psytech Ltd.

CONCLUSION

No aptitude testing method will ever be 100% effective. But the excellence of the RAF's selection and training continuum is borne out by high graduation rates which stand out in the forefront of worldwide achievement. We can be proud of ourselves now but we must continue with research and development in order to maintain the standard.

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THE OFFICERS AND AIRCREW SELECTION CENTRE - A SNAPSHOT

by Flight Lieutenant Kate Allen

"When were you born?"
"Where were you born?"
"Where are you living now?"
"Where else have you lived?"
"How would you describe your home life as you were growing up?"

Do these questions induce flashbacks and nightmares from your experience of selection? The questions may have changed slightly since you came through, for instance we no longer ask for your age in years and months but the sentiment remains the same. These are just the some of the questions I ask as an OASC Boarding Officer, several times a week. The questions do get more complicated…. though some candidates still get those initial questions wrong!

In 2001, OASC was undergoing a slow change process. No longer the domain of Wg Cdrs and Sqn Ldrs, it was decided that Flt Lts would get the chance to be Boarding Officers too and I am the second Supply branch JO to work at OASC. Which gives me the opportunity to dispel some myths, most of which are generated from those experiences I alluded to earlier.

1) Boarding Officers are not split into interview specialists and exercise phase specialists; we all do both.

2) We do actually work very hard, and some long hours (we process over 2500 candidates a year).

3) We don't just do boarding (possibly the title Boarding Officer doesn't help there).

4) We don't all have handlebar moustaches (only one of my colleagues has and he is a pilot).

5) We're not all aircrew.

6) The majority are actually under the age of 50.

7) It is not 'good cop, bad cop' format.

8) We do not try to catch candidates out.

9) We do not inspect candidates' bedrooms or watch them eating in the mess.

10) It does not matter what school you went to; your academic achievement, aptitude and overall performance are what count.

A bright sunny day at Cranwell, 3 new pilot hopefuls approach.

I arrived in March 2005 and, following 2 weeks pre-employment training, which you do have to pass, and a week 'on the job' training, I was ready to be a Board Member. Six months later, my 'probation' ended and I was deemed fully competent. This happens to every Boarding Officer, regardless of rank and standardization checks are carried out frequently. The period of probation may be longer than 6 months if a boarding officer is considered to need extra training. I am now a Board Chairman as well as a Member. From your own selection, you may remember that in the Exercise Phase, the Chairman was the one on your left who asked all those nasty questions in the Group Planning Exercise, and the Member was on the right who asked similar nasty questions during the Individual Planning Exercise.

These are the Selection boards we run:

Ab Initio Direct Entry Boards for Initial Officer Training, Non-Commissioned Aircrew Initial Training Course and Reserve Officer Initial Training.
Commissioned Warrant Officer Boards.
Reselection Boards.
Cadetship and Bursary Boards.
Sixth Form Scholarships Boards.
Defence Sixth Form College Boards (Welbeck).
Service Re-entrant Boards.

The aptitude tests are slighter more technologically advanced these days- but I thought some of you may remember it all looking like this.

Those of you who are younger may remember the aptitudes are like this now…

Specialist Boards.

We help conduct boards for the Civil Service, Rolls Royce, Douglas Bader flying scholarships and Philip

This candidate looks rather happy. He hasn't got to the cough test yet….Or maybe he has.

Sassoon Memorial Scholarships to name but a few. We also liaise with Armed Forces Careers Offices, University Air Sqns (UAS), auxiliary sqns and the TA.

Candidates undergo a whole raft of aptitude testing and medical checks before the boarding officers get to see them. As most of these tests are conducted by specialists I will concentrate on those aspects of selection with which I am most familiar; the Interview and the Exercise Phase.

OASC develops interview skills that are different in style to those required of a Flt Cdr or Sqn Cdr. There are no long silences whilst one hopes that the interviewee will expand upon their personal problem. There are 90 headline questions that are asked in 45 minutes and that does not include questions where we expand upon a topic, such as membership of the Boys Brigade or the UAS. We have no room for overly verbose answers or a lack of alertness as 7 interviews on average are running at once, within tight timescales, being observed over a CCTV system by one syndicating president. The role of the President is to officiate and ensure fair play with the final decision on the disposal of a candidate.
If a serving airman, soldier or sailor applies for a commission or Non-Commissioned Aircrew (NCA), we also see their last 3 annual appraisals and any recent detachment reports. As a result, we sometimes can see how a candidate may be considered suitable for commissioning by their line management, not always because they possess the right qualities, but because they happen to shine in a weak or small field of their peers. If an airman is industrious and uses their initiative, they may be a strong prospect for promotion, however it is also worth considering if their qualities are appropriate for commissioning or NCA. We also appreciate a comment by any commissioned officers in the reporting chain on NCA or commissioning potential if the subject has asked to be considered.

Many candidates can practise the interview; indeed many have an unfair advantage because they may be overly coached on what questions may appear. This may help them have a successful interview but we are able to see their real personality during the Exercise Phase.

The Exercise Phase is divided up into the Discussion Exercise, Hangar Familiarization, Leaderless Exercise, Individual Planning Exercise and Command Situation Exercises. The running of each exercise is divided between the Board Members. When one Member is running the exercise, the other Member will be assessing with hot debriefs carried out between each exercise when the candidates are getting a short break.

The Board Member runs the Discussion Exercise and there are generally 3 topics discussed by the candidates. The Board Member generates interest when opening the topic and ensures differences of opinion do not become over-enthusiastic! In the Discussion we assess 3 different competencies with sub-categorisations within each. We typically have 6 candidates, so not only do we listen, we notice how they are speaking, how confident they are and if their contributions are actually meaningful. As a new Board member it requires a lot of concentration but you soon become used to looking and listening to the most important elements.

All candidates now get an non-assessed hangar familiarisation lesson on the techniques that they will need to cope with the hangar tasks. Activities include, how to tie planks together, the basic rules of physics when it comes to bridge construction (it is amazing how many candidates try to defy the laws of gravity), and a brief over the infamous General Rules and Special Rules. This lesson is conducted by an independent boarding officer so candidates do not feel afraid to ask questions.

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The Leaderless Exercise follows hot on the heels of the Hangar Familiarisation. The Board Member also runs this exercise and ensures the safety of the team and frequently gets the syndicate going with a hint normally as subtle as a sledgehammer. It can be difficult to encourage the syndicate to spend less time

Don't look down…

talking and more time doing the exercise. The Leaderless Exercise lasts for 30 minutes and is rarely finished.

Next is the Group Planning Exercise run by the Board Chairman. The candidates have 20 minutes of private study, then 20 minutes of discussion where they attempt to produce a comprehensive team solution to the problem before the group are questioned by the Board Chairman. Therefore, the Board Chairman has to assess 5 different competencies as well as establishing an understanding of the syndicate solution and tailor the questions accordingly. Here, fair play is essential; we try to ask each candidate the same amount of questions and spread the difficulty factor amongst them too.

The following day, each candidate gets to display his or her individual problem solving skills during the Individual Planning Exercise. Each candidate has 20 minutes of private study over a problem then comes in to the syndicate room and is questioned for around 10 minutes on their detailed ideas for solving the problem. The Board are allocated 3 minutes debrief time between each candidate and it all runs to the second. We can invariably manage an accurate debrief in 1 min 30 secs, leaving another 1 min 30secs if there are any differences of opinion. To the layman this may seem too fast, but we are very well practised and our progress is monitored, so no candidate gets a disservice. Boarding officers who have been away from boarding for a while, or new boarding officers, are inevitably slower at debriefing.

The last exercises are the Command Situations. They are similar to the Leaderless, but the exercise only lasts for 15 minutes and each member is appointed as a leader in turn. We have many hangar exercises to choose from that vary in size, height and physical complexity. They are all challenging, but some require more problem solving whilst others can be more of physically taxing. Paradoxically, the boarding officers do not have suggested solutions to these exercises, we have to work out how they are achievable (they can all be done in the 15 minutes allowed) but there are no impossible tasks. When a candidate comes up with a new way of working out one of the command situations (and it works) the method spreads amongst the staff like wild fire. Although it is a rarity!

In such a short article I have only been able to touch on a small aspect of the selection process but I hope I have given you a flavour of the diversity of a Board Member's responsibilities as well the tight time scales involved.

E1 had just dropped E2 into the shark infested custard. She wasn't very happy.

So that, in a nutshell, is what boarding officers get up to, just when we are boarding. We have many other duties, but not as interesting to the casual reader I would guess. I love my job here at OASC, and there are always absolute howlers that happen everyday. Here are just a few:

Boarding Officer: "The RAF isn't all about warfare and operations, we have secondary duties too. What do you understand by that term?"
Candidate: "Well, that's where everyone pulls together and helps out, like washing up in the officers' mess after dinner."
Boarding Officer (trying not to laugh): "Why do you think you'd have to do the washing up?"
Candidate: "Well, some of you cook dinner and others wash up; it's just like helping out around the house when you're at home."

Boarding Officer: "What fast jets do we operate in the RAF?"
Candidate: "Tornados, the Typhoon, the Jaguar and the Hercules."
Boarding Officer: "What is the role of the Hercules?"
Candidate: "It has a vertical take off and landing capability and it is a ground attack aircraft."

Boarding Officer: "I start with the easiest question of all then…When were you born?"
Candidate: "*How* was I born?"
Boarding Officer: "We've had 7 new countries join NATO in the last few years; what area of the world are they from?"
Candidate: "From East of the Equator."

Boarding Officer (An Admin (Sec) officer): "What other branches did you consider in your application?"
Candidate: "My first choice is Engineer because of my background, but I have thought about Supply and I have even considered Admin (Sec) although that

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RAF Officer Recruiting And Selection

Group Captain Ian Tolfts OBE MA MCIPR RAF - Gp Capt Recruiting & Selection

2012 was a significant year for Recruiting and Selection, as it saw the merger of the previously separate Recruiting organisation and the Officer & Aircrew Selection Centre (OASC). These 2 organisations, integral to the selection of quality officers and airmen – both regular and Reserve – to serve in the Royal Air Force have both a proud history and an enviable reputation. However, with a need to rationalise manpower and create a Recruiting and Selection organisation fit for the future, it was agreed that an integrated organisation would be established on 1 August 2012 under the command of a single Group Captain. Following detailed planning, the new organisation stood up successfully on the due date under the command of Group Captain Ian Tolfts OBE MA MCIPR RAF. Whilst organisationally and functionally this change is significant, the core aim of the new organisation remains unchanged:

To attract, select and recruit sufficient, quality officers, direct entry SNCOs and airmen – both regular and Reserve – to meet the RAF's manpower needs.

The following short article gives an insight as to how the aim was tackled during 2012.

Recruiting

Whilst recruiting numbers remained somewhat suppressed during 2012, to assist with the drawdown in the size of the Royal Air Force to meet the 2015 requirements defined by the 2010 Strategic Defence and Security Review (SDSR 2010), the recruiting staff across the country have remained busy seeking to attract and select the best possible candidates to fill the required vacancies. Integral to this effort has been face-to-face engagement with the public. Attending a wide variety of events from town shows to careers fairs, such engagement has not only generated interest in careers but also allowed the public to gain an insight into the role of the Royal Air Force. Given the Royal Air Force's limited footprint in many parts of the country, this engagement and awareness raising role is important. Attending events is nothing new but, in 2012, through a partnership with a new event management company, the focus has been subtly changed. By using detailed market and audience analysis, the recruiting teams have attended more events that have a higher proportion of young adults – the target audience for recruiting. As ever, the main events 'season' comes during summer. Attendance at the many events required was a significant challenge as over 50% of the recruiting force were necessarily deployed to London for Olympic security duties. Notwithstanding the considerable strain this deployment placed on the recruiting force, a 'light blue' presence was still seen across the length and breadth of the country. Despite enthusiasm to maximise the RAF Recruiting presence at the Olympics, plans to place recruiting leaflets in the bags of people searched entering the Olympic venues were not implemented as it was felt that LOCOG might object! But you cannot fault the enthusiasm of the recruiters in trying to exploit the opportunity.

The announcement of the Future Reserves 2020 paper early in 2012 set the requirement to nearly double the size of the Royal Auxiliary Air Force by 2016, with the task of recruiting the additional people falling to the recruiting organisation. Cognisant of the need to keep advertising expenditure to a minimum, a dedicated marketing campaign using a series of new and innovative marketing methods was created. Television sponsorship, cinema advertising, and extensive use of social networking, have (and will continue to) been central to the campaign as well as engagement with employers of prospective reservist personnel. Once the campaign got under way in earnest in late 2012, the results were near instant with applications rising by over 100%. Whilst there is much work to do, the signs are positive. And, of course, the RAuxAF can recruit people up to the age of 50 so, if you have left the Service, meet the age criteria and feel you are missing that RAF esprit de corps, why not apply to join the 'Auxiliaries'!

The RAF Recruiting Team: teaming up with the events management industry to recruit future leaders.

OASC Hangar Exercises continue to provide a standardised testing facility for potential recruits.

Spanning recruiting to both the regular and Reserve is the need to increase the number of people from ethnic minority backgrounds joining the Service. As a military force, it is important that the Royal Air Force is representative of the society that it defends. Societal misconceptions about the role of the military restricts the number of ethnic minority personnel who apply to join Your Royal Air Force and, accordingly, a wide ranging plan – which will span a number of years – has been put in place to build trust and understanding amongst ethnic minority communities and people with the aim of showing that the Royal Air Force offers excellent career opportunities in a truly inclusive organisation. Activities range from working with local groups, activities within schools through to detailed dialogue with groups of community leaders. Although early in its implementation, all indications are that the communities and individuals welcome this engagement.

Officer and Aircrew Selection Centre

Despite the fact that the Royal Air Force has not selected any pilots for entry into training for nearly 2 years, OASC has remained busy selecting personnel for the many other branches, whilst at the same time downsizing and merging with RAF Recruiting. Notwithstanding, the core tools for assessing the potential of candidates to become officers or Direct Entrant SNCOs have not changed fundamentally as they have stood the test of time. Indeed, such is the regard with which OASC is held, a number of other Air Forces from around the world have expressed interest in adopting the methodologies and tests used. To this end, OASC hosted visits from the Royal Jordanian Air Force, the Royal Air Force of Oman, the Kuwaiti Air Force, the Belgian Air Force and, notably, the Royal Canadian Air Force. All left most impressed by the very high success rate that the Royal Air Force achieves in flying training based on OASC assessment and testing. A number of these countries have now agreed to purchase the OASC system – which makes OASC a 'global brand'! When spare capacity in OASC's aptitude testing suite has existed, we have also been able to offer opportunities to charitable trusts, such as the Air League Educational Trust and Flying Scholarships for Disabled People (in the memory of Group Captain Sir Douglas Bader), to determine the suitability of their candidates for private pilot training. All told, OASC remains at the vanguard of officer and aircrew selection and, as highlighted, is gaining a worldwide reputation for excellence.

The OASC Hangar offers a chance to demonstrate individual flair, in addition to teamwork.

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Spring 1964 - Henlow-Cranwell Merger (1)

THE HENLOW-CRANWELL MERGER

This article is based on a talk given by Squadron Leader P. B. MacCorkindale, who is responsible for the planning and co-ordination of the merger, at a conference held in the Whittle Hall on 7th January 1964.

In 1959 the Commandants of the R.A.F. Technical College and the R.A.F. College made a combined study of Air Vice-Marshal Marson's report on the Technical College. As a result of their conclusions, the Air Officer Commanding-in-Chief, Flying Training Command recommended that a merger of the two Colleges was necessary to bring permanent General Duties and Technical Officers together and in particular to start them off in the Service with a common basic training. In March 1961, after the ways and means had been agreed, the Secretary of State for Air announced to the House that the two Colleges would be merged. He said, " Cadets of all branches will be trained together, and, in addition to achieving greater administrative flexibility we believe that the Service and the cadets of both branches will benefit by working under the same roof."

A Committee under the Chairmanship of Air Vice-Marshal, now Air Marshal, Sir John Baker-Carr was formed to continue planning the works service programme, to consider the best means of intergrating training, and the organisation necessary for the Cranwell of the future. As the Baker-Carr Committee's proposals are still *sub judice* they cannot be reported here. Nevertheless, whatever organisation is finally decided upon, the cadets of the Technical Branch will be fully integrated into the four existing squadrons of the Cadet Wing. They will all be called flight cadets and will stay at the College for three years. However, owing to the high grade academic content of the course which is complementary to the technical instruction, it is unlikely that any integration can occur in academics, except perhaps in Humanities and War Studies. After the Technical Cadet has been commissioned alongside his contemporaries of the other branches, he will continue his studies for the Diploma in Technology or Higher National Diploma for a further one and a half years. This phase of his course will be done within the Student Technical Officer Element at Cranwell and he will live in the new Student Officers' Mess.

Cadet entries 84 strong are expected to enter the College twice a year — 60 General Duties, Equipment, Secretarial and Regiment and 24 Technical. Discounting wastage, the planned peak cadet population is expected to be 504. The student officers, who will be undertaking engineering courses of varying length and type, some at post-graduate level, should reach a peak of 320 by 1969.

The first of the many building projects is now much in evidence just East of the Taj Mahal (the present Education Section) which is complementary to it. This three storey building will be 150 yards wide and the two wings 100 yards long. The intention is to replace the Taj Mahal and complete the square in ten to fifteen years time. The building will contain the Electrical and Weapons Systems and part of the Mechanical Engineering Wings, now at Henlow, together with Administrative Headquarters.

Plans for the building of the Aerothermodynamic Block, the Aircraft Hall, the Instructional Workshops, the new Students' Mess, and the extension of the present Officers' Mess, which were outlined in the Spring 1963 issue of the *Journal*, remain unchanged. 72 Officers' Married Quarters have just been built, 75 more just begun and 15 more approved. A N.A.A.F.I. sub-shop will be built in the area. 54 Airmen's Married Quarters are to be built at Cranwell, 100 will be made available at Winthorpe and 73 at Spitalgate.

To enable it to have its own specialist department and to allow maximum concentration in the Tutorial Wing of academic classrooms, the Equipment and Secretarial Wing has moved into buildings previously occupied by the Royal Air Force Selection Board. The ground floor (West) of Barrack Block 329 will be converted for the use of the Station Education Section.

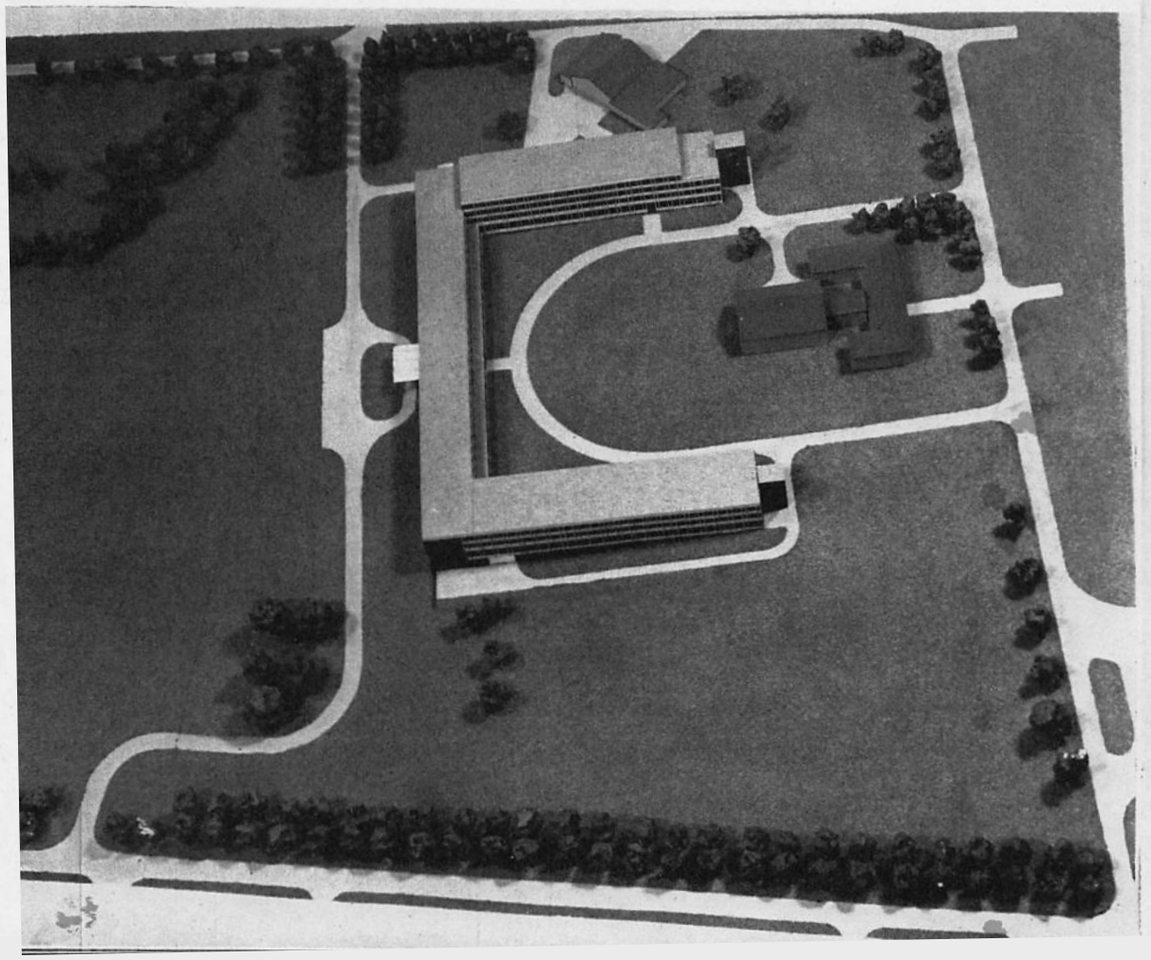
Cadet accommodation will be increased by using Daedalus House, and, it is hoped, by converting two more huts of the South Brick Lines which will be centrally heated. The Group planning staffs will occupy most of the top floor of the existing Headquarters building. The Telecommunications Centre will move out to an adjacent building, where a new automatic exchange will be installed. This will leave the whole of the ground floor and part of the first floor for Station Headquarters. College Headquarters will be housed in the former museum, memorial chapel and fiction library of the main College building.

The existing Tutorial Wing, together with all the new engineering instructional facilities to be built for Henlow, will be for the common use of cadets and student officers. Broadly speaking, the Basic Sciences and Humanities will be taught in the Tutorial Wing and applied subjects in the new building.

The task of removing Henlow's vast range of equipment to Cranwell is formidable but plans for the move are already well advanced. Personnel and advance parties of departments will begin to arrive at Cranwell in April 1965, and the Technical Cadets will start training at the beginning of the Autumn term the same year.

The merger will have a significant effect on Cranwell and on the Service as a whole ; the amenities will be the envy of all and they will be adaptable for any pattern of Royal Air Force training decided upon for the next twenty years.

Architect's model of the R.A.F. Institute of Technology



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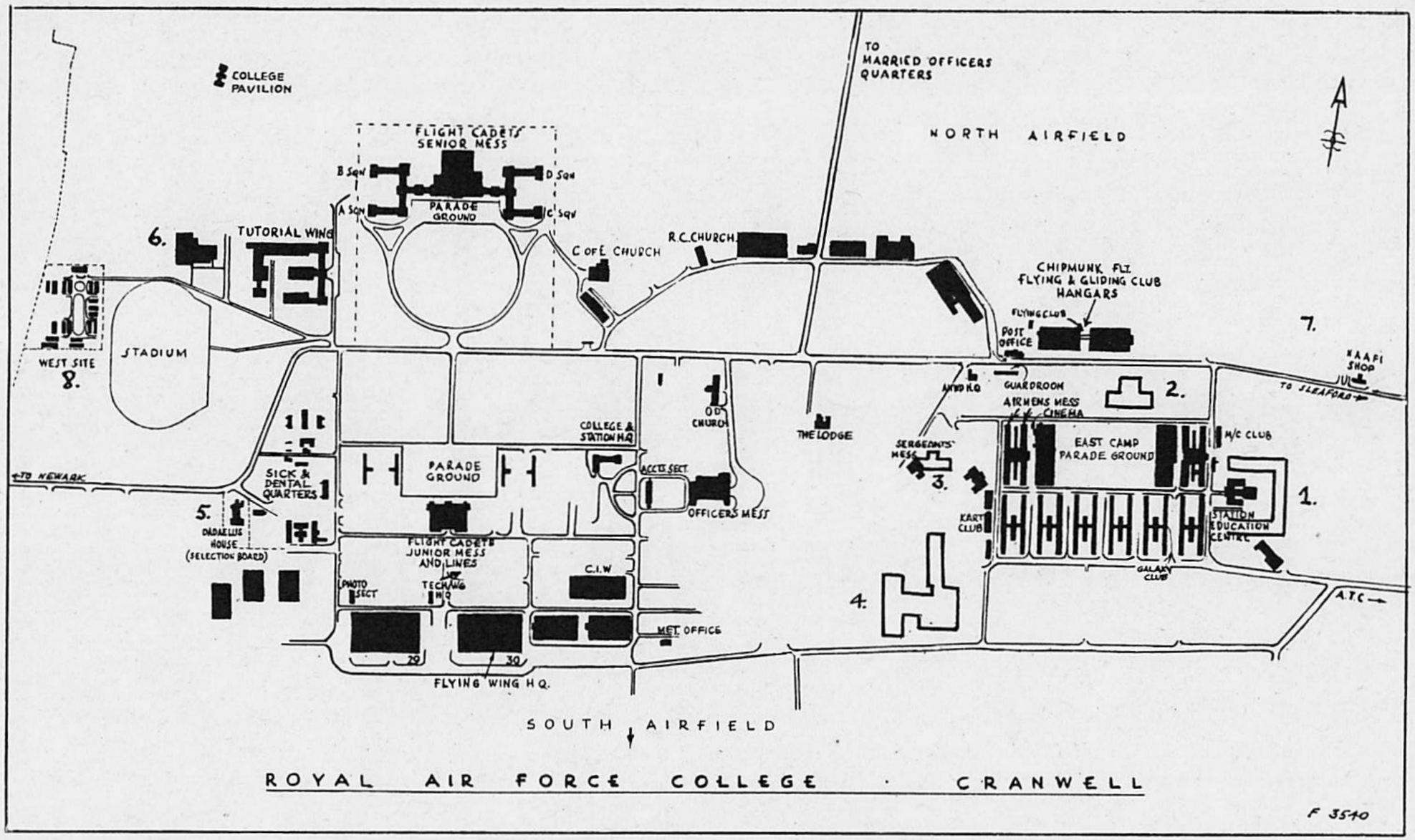
Spring 1964 - Henlow-Cranwell Merger (2)



SKETCH MAP KEY

1. The R.A.F. Institute of Technology. 2. The Airmen's Mess. 3. New Sergeants' Mess. 4. New Student Officers' Mess
5. Daedalus House : Equipment and Secretarial Wing 6. Gymnasium and Swimming Pool. 7. New Children's School (open last year)
8. West Site : R.A.F. Regiment and Navigation Training

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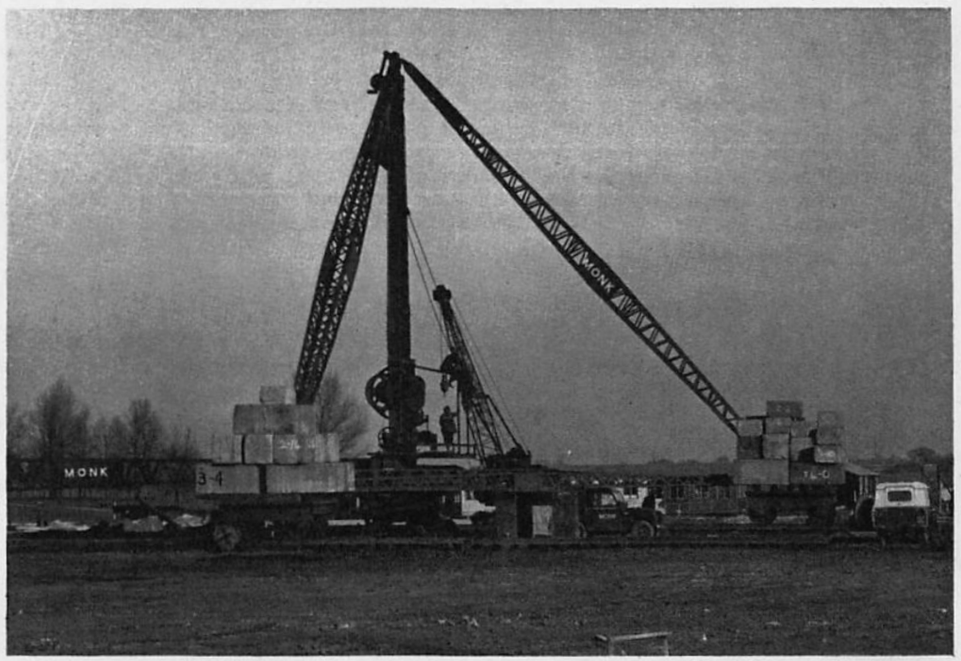
Spring 1964 - Henlow-Cranwell Merger (3)

Cutting the first sod—The Commandant and his ' spade '



A sight that would have been welcome to the Pharaohs' labourers ?

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July 1968 - Management Training (1)

MANAGEMENT AND MANAGEMENT TRAINING

by WING COMMANDER D. WOODS

I have written this article as the first of a series to be produced by Engineering Management Wing and published half yearly in the College Journal. The Engineering Management Wing is the junior member of all the Wings of the College and has been in existence since January 1967, although most of the staff did not arrive until the summer of that year. Although the task of the Wing is primarily to teach management principles and practice to Engineer Officers on courses run within the Department of Engineering, the expertise of the management teaching staff is used generally in the College and training is given to engineer, equipment and secretarial cadets and, eventually, will be given to GD cadets. This first article attempts to look at management in general terms and serves as an introduction to future articles from Engineering Management Wing Staff on specific subjects that each member is experienced in.

Management Defined

Firstly then, what do we mean by management ? How many of us can precisely define what it is ? Very few I'll be bound. We would even be hard pressed to find amongst the many books written about management, two which would give the same definition. Nevertheless if we are to learn about management and in the process analyse its various functions then we must know its meaning. In his book on ' Management, its Nature and Significance ' Brech suggests that management is a social process entailing responsibility for the effective planning and regulation of the operations of an enterprise. Louis Allen, in his book ' The Management Profession,' defines management as the mark of planning, organising, leading and concontrolling, performed by a person in a leadership position to enable people to work effectively together to attain identified ends. Yet another definition is by Koontz and O'Donnell in their ' Principles of Management,' who say that management is the accomplishment of desired objectives by establishing an environment favourable to performance by people operating in organised groups. There are many other definitions, some short and some long, some meaningful and some obscure, but all slightly different in one way or another. However, from the multitude of words of the many different definitions at least one common thought tends to emerge which is that management is concerned with people. Without people there cannot be management. Perhaps we should pause here because your immediate reaction will be to challenge this statement. What about the small shopkeeper running his own business you'll say, or any one man enterprise for that matter ? Are these people, who are working for themselves, not managers ? Do they not plan, organise and control their business toward the objective of making profit ? Of course they do, and if management is defined solely as the act of planning, organising and controlling, then indeed they are managers. But this is not all that management is about ; it is about the co-ordination of people at work and the creation of an environment within which human beings can be directed to achieve objectives both effectively and efficiently. Management is about people and is an activity which any person can perform given the authority to do so ; although even without authority managers (or leaders) emerge from groups of people working together. If a person exercised authority to co-ordinate the work of others toward the achievement of an aim, then he is a manager. In the process, he is expected to make the optimum use of all his resources.

The Development of Management

In co-ordinating work and in optimising the use of resources, the manager follows a process, or series of processes, which guide his actions. These concern the forecasting of trends and developments to determine objectives ; the organisation of resources ; the delegation of responsibility ; the direction and motivation of staff ; the control of work. These processes are determined from principles arrived at over many years and documented only in haphazard fashion. There are few books which codify management principles to any serious degree, because principles have been slow to emerge and, until recently, there was a dearth of management literature. It is worthwhile studying the work of management pioneers of the nineteenth and twentieth centuries. Only in the nineteenth century were great advances made in management thinking largely as a result of the Industrial Revolution. But the art of management is not new for it has been in existence almost as long as man has existed. In earliest civilization the human race still had its problems of organization and control. The tasks which were performed in days gone by were perhaps less complicated, but were often most ambitious. A good example is the construction of the pyramids of Egypt where planning and organization for the project, formidable by any account, required many years of co-ordinated effort of men and materials, coupled with the expert use of the most rudimentary of equipment. Compare this project to that of a present day construction task of, say, a thirty storey building. There is not so very much difference. But the application of modern ideas and modern equipment of the present day results in shorter time scales and an improved finish to the product. Until the nineteenth century industrial production was carried out largely in small scattered units, other than in the larger industries of steel and ship building. With the advent of the steam engine and power driven machinery the need for large scale organizations was created. From many one man businesses, partnerships and other associations evolved alongside the rapid technological advance of the Industrial Revolution. A new era began in the application of management, giving fresh relationships between men, materials and machines. The main advances were in scientific thinking, in administration and in the investigation of human problems. Improvements were also forthcoming in financial management, marketing, recruiting of labour and in personnel management.

Perhaps the most outstanding man in the nineteenth century for his ideas on scientific management was the American, Frederick Winslow Taylor. He laid down the essential principles of the scientific approach to business management. He was a brilliant engineer and his work on the philosophy of organization is perhaps the most important of his achievements. He was a well educated man but started work as a machinist, and it was then he became aware of the restrictive practices carried on at the shop floor. He wanted to tackle this particular problem and the opportunity arose when he was promoted shop foreman. The problem was largely one of ignorance by the works management who had no idea what men could and should produce, or how to provide the right incentives giving fair rewards for a fair day's work. In those days the environment at the shop floor was long established and management accepted such things as the indifferent supply of materials and tools, the erratic running of machines, petty disturbances to the work routine and so on. Far from putting these right, management was often unaware of them. Also, rates of pay for production were decided without any real fact finding and without precise and accurate knowledge for calculating what they should be, as a result they were often wildly astray. If they erred on the side of the producer then they were arbitrarily cut. Taylor set out to change all this. He started by examining in detail the work of a single worker on a lathe working through the complete process of metal cutting. He systematically analysed the problems to find what caused them ; he investigated the reasons for delays and corrected them ; he isolated the more difficult problem areas and gave them special attention. He took measurements wherever possible and set about improving those factors which would lead to high performance. He found that many delays in production were not attributable to the machines but were caused by a lack of planning. For instance, materials might not arrive on time, at the finish of one job no other was there immediately to take its place and so on. The organisation of the factory in those days required specialist foremen to cope with their own planning, and this they were invariably unable to do. So Taylor changed the organization, separated planning from the functional production line and

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MANAGEMENT AND MANAGEMENT TRAINING :
THE BEHAVIOURAL SCIENCES

by SQUADRON LEADER A. J. I. DAVIES

'If we neglect to gather up experience as we go, we expend the knowledge of every day on the circumstances that produce it.'

Thomas Paine: 'American Crisis' 1776

The first article in this series on 'Management and Management Training' took a general look at the meaning of management and the philosophy underlying Management training. The aim of this article is to look in general at the work of the Beavioural Scientists in management training.

What are the Behavioural Sciences ?

The Behavioural Sciences are concerned with information and generalisations about human behaviour. In management training their application is to the social process which is called managing. The data sources are varied and Figure 1, although not exhaustive, exhibits the main ones. Fig 1 does not, however, indicate to the reader that connections exist with other disciplines, particularly, economics and applied technology. Pay and cost control are at the same time, both economic and psychological issues. Resistance to change has often engineering as well as psychological ramifications. Similarly, the study of organisational goals and values stems from Social Philosophy while Political Science has provided a basic philosophy about formal organisations, particularly the rules to which men ought to be committed. 'Hard data' is, however, our concern and therefore psychology, (occupational, clinical, educational, social and organisational) remains our main source of data while we maintain the necessary interdisciplinary approach where the training objective demands it.

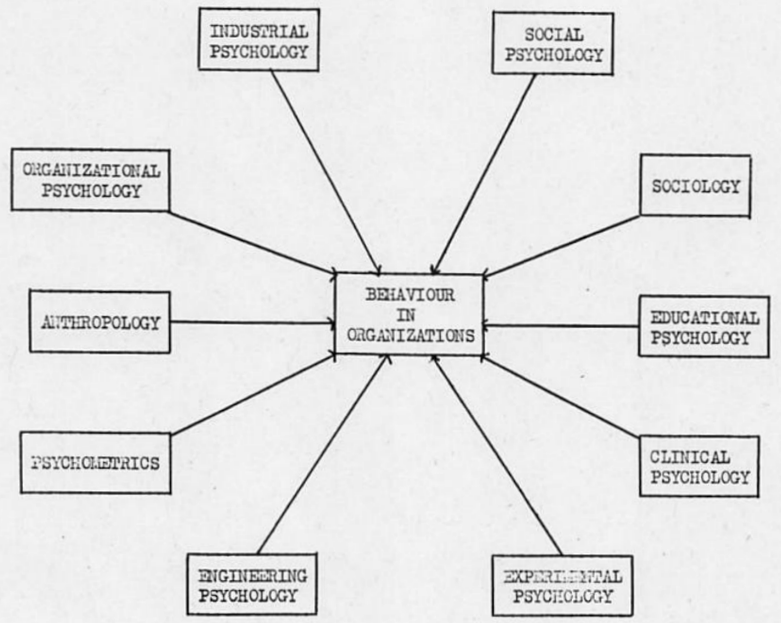

Figure 1: Some of the disciplines which contribute to the Study of Behaviour in Organisations.

What Value have the Behavioural Sciences in Management Training ?

Basically, the Behavioural Sciences have values for management in three ways :

— They formulate abstract concepts and provide data about human behaviour in systems of interdependency.

— They provide a means of handling data and thinking about complex relationships.

— They contribute to the decision-

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July 1969 - Management Training (2b)

making programme with respect to change.

It is, therefore, not by chance, that during the last 30 years the bulk of literature and research in the management field has stemmed from men who have applied their knowledge of the behavioural disciplines to an examination of the nature and improvement of management practice and management training. It is as a result of the work of men like Allen, McGregor, Likert, Argyris, Bass, Haire and many others that the impetus to contribute new research findings and new concepts proceeds undiminished.

Concepts and Data

Management is essentially a social process involving interactions, inter- and intra- personal relationships, objective setting, the utilisation of human and material resources, personal values and feelings and decision making. It is essentially, too, a process which often has a readily measurable outcome.

An example might clarify this statement as well as clarifying the nature of some behavioural concepts.

In Figure 2 is a diagram which is adopted from Homan's original concept of the system of small work-group behaviour. The parallel with any Royal Air Force flight or section can be drawn by the reader without further elaboration. The reader will also notice that the critical area is that of ' Emergent Behaviour ' in which the level of outcome is decided. He will notice, too, that the system is closed-looped. The ' outputs '— task accomplishment, satisfaction and the development of the individual-provide feedback which leads to adjustment of the ' inputs.'

Behavioural studies relate consistently to a general conceptual approach such as this. Research in communication, value systems, status, motivation, personality, attitude formation, human aptitudes, learning and appraisal methods show that within the critical area of ' Emergent Behaviour ' the correlations between independent human, organisational and technological variables are likely to furnish data which give guidance as to the nature of the factors influencing the ' output ' in Figure 2. The knowledge of such data and the means of handling it are critical to the behaviour of any officer who is to manage his section effectively.

Studies in work group behaviour, since the days of the Hawthorne Experiments in the late 1920's and early 30's have also brought a better understanding of the dynamic forces in operation in group behaviour, particularly in the nature, cause and effect of change on organisational behaviour. Task analysis, studies in environmental conditions, selection of personnel, the nature of authority, equipment design, job analysis and objective setting are still further facets of the application of the Behavioural Sciences to the problems of practical management. Each contributes in part to a better understanding of human behaviour and how to control it.

Decision Making and Change

So far concepts, and data sources which provide the meat of the Behavioural Sciences have been mentioned. However, in management literature, whether it is a text book, newspaper article or professional journal, the words ' decision making ' seem the most frequently recurring. The manager is, of course, concerned with *making* decisions but, in addition, he is equally concerned with applying, controlling and measuring the effectiveness of his decisions. His job is not only to look back and deduce why a course of action was successful or unsuccessful or why a policy he instigated succeeded or failed but also to interpret his previous experience and knowledge to come to a decision whose outcome is predictable. He is expected both to be analytical and at the same time to be creative and forward looking. His problem therefore would seem simply to ensure that :

— He gets the information upon which a decision can be based.

— He interprets the information and tests its relevance.

— He interprets his previous experience and estimates its relevance to the problem.

— He predicts the likely outcome of his decision and the effectiveness of the outcomes.

Going through as simple a four-stage process such as this would seem to be a rational problem solving behaviour that most would claim to follow. However, both experience and research indicate that often a far from rational approach is taken, particularly in conditions of uncertainty and change. The decision maker, at each stage in the process, despite his intention to be rational is limited by attitudinal, motivational and group factors. Much can be done at each stage to reduce these restrictions on creativity, inventiveness and accuracy of decision and this is part of the task of the Behavioural Scientist involved in management training. In this sense the Behavioural Science Squadron in Engineering Management Wing complements the work of Management Science Squadron which is involved in teaching quantitative decision-making techniques.

Behavioural Sciences and Training Strategies

In management training circles one often hears the expression ' before sensitivity training and after ' applied to the transition which has taken place from the old ' human relations ' courses to modern management training strategies. There is no question that Sensitivity Training and research in training methods since the ' 50's ' have had considerable impact not only in management training but other adult training areas. Basically the change is to recognise that teaching cognitive skills on their own does not produce the desired behavioural change in trainees. This has led to the use of training strategies which seek to induce attitudinal change while, at the same time, imparting new knowledge and skills. Case studies, group dynamics exercises, and management style workshops have become an integral part of the overall training strategy. The student is made to review his own behaviour against the mirror of the data which is made available to him and to study his own effectiveness in realistic situations.

The training objective of the Behavioural Scientist involved in Management Training is, to present selected data and to create training situations which enable a trainee to develop an appreciation of the human environment in which he is to make rational decisions and control behaviour so as to achieve the objective of the organisation in which he works. To achieve his own objective the trainer must, therefore ensure that the student has :

— Studied the nature of human beings and the nature of their differences.
— Learned the nature of his future task.
— Become aware of his own strengths and weaknesses.
— Been taught to anticipate the likely effect of his behaviour on those he has to manage.
— Developed the right attitudes to his future role and identified himself with the organisation's objectives.
— An awareness of the needs of individuals and is sensitive to situations which he is likely to meet.
— The ability to make decisions which, as far as possible, are rational and objective.
— A desire to be creative and forward looking.

This is a tall order for any course of training and although the Behavioural Scientist might express his doubts as to the efficiency of the training he gives because of the difficulty of measuring their effect he is unlikely to deny that this is (a) what he is trying to achieve and (b) what needs to be done if managerial effectiveness is the ultimate goal. Certainly the advances in training strategy and the nature of the content lend themselves better to the study and understanding of human behaviour in organisation than ever existed in training in this field.

Conclusion

I have made no attempt to outline syllabuses of training in Behavioural Science in Engineering Management Wing nor dealt with the Behavioural Scientist operating in a consultancy role, my aim has been to give the reader some idea of the approach and concern of the Behavioural Scientist in the broadest terms. I would emphasize that, by itself, Behavioural Science would not present a complete training for the manager. Although in the final analysis it is the behaviour of men that determines the effectiveness of any organisation, without the technical skill and knowledge of techniques within an organisation, complete effectiveness would be impossible. Behavioural Science, therefore forms no more than a part, if essential part, of the training of a manager.

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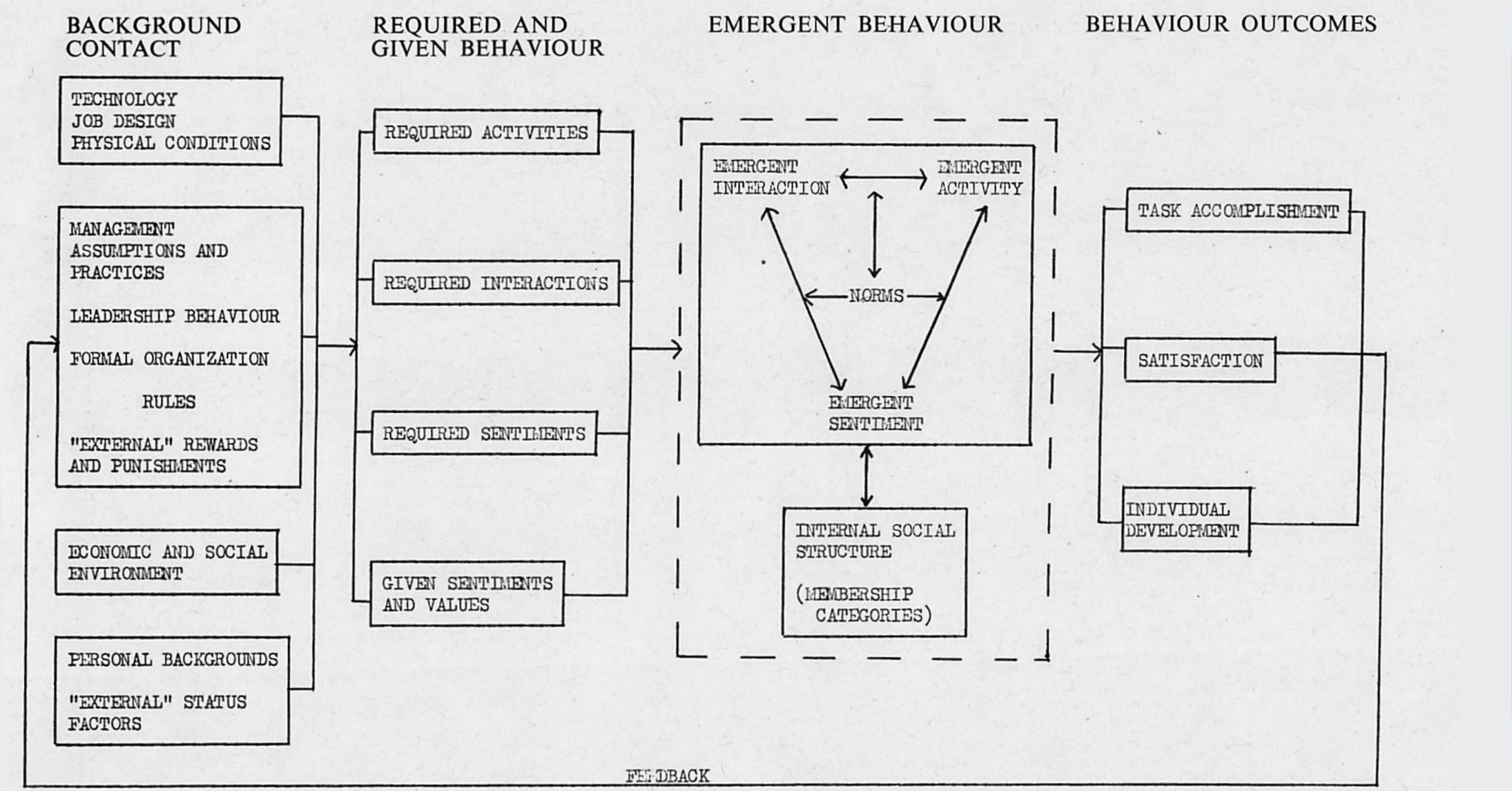

Figure 2: Small Work Group Behaviour: A Conceptual Scheme.

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July 1969 - The Graduate Entry Scheme (1)

THE GRADUATE ENTRY SCHEME: A MILESTONE IN CRANWELL'S DEVELOPMENT

by

SQUADRON LEADER A. M. NEWBOULD BA
University Advisory Officer

In December 1968, Mr Gerald Reynolds, Minister of Defence for Administration, announced that the Royal Air Force would in the future recruit its direct-entry permanent officers from the universities. Behind this decision lay new thinking on the evolution of Cranwell's role as the first Air Academy. Lord Trenchard's original concept of it is as valid today as it was 50 years ago, but technological and social changes now dictate changes in the pattern of Royal Air Force recruiting which must be reflected in the internal structure of the College. As flying and professional training have become increasingly complex and expensive, it has become more and more difficult to maintain a challenging academic content in the Cranwell course. Yet the future leaders of the Service require more than ever before a 'mind-stretching' exercise early in their careers to prepare them for the increasing complexities ahead. The problem might have yielded to a variety of less drastic solutions, but other factors were working to force the all-graduate decision.

In an age of expansion in tertiary education, of emphasis on qualifications and of initial progress according to GCE A-level performance, Cranwell's entrance requirement of 2 A-levels is increasingly likely in the future to attract rejected university applicants rather than the really valuable young men who now and in the past have preferred Cranwell training to a degree university. If nothing is done there is a danger that the College, forced to draw its recruits from a relatively lower cut of the academic cake, will suffer a drop in standards - not, perhaps, in absolute terms, but certainly relatively. Attempts to obtain degree recognition for the standard Cranwell course, a move that might be expected to maintain the quality of recruiting, have met with only limited success. The CNAA Degree Course for Engineers was achieved, but for other branches the results were disapponiting. True, 20 flight cadets obtained external degrees in a recent experiment, but any general award of degree status proved impossible. It would have been possible if the course could be lengthened to four years and if financial considerations were no object, but our numbers are relatively so small that we cannot compete with the universities in offering a range of degree courses economically. We have, therefore, to face the fact that the type of young man on whom Cranwell's great tradition has been built will more and more be found in the universities, and that is where we shall have to look if we wish to bring him back.

While Cranwell's prospects have been subject to these growing doubts, the Royal Air Force university cadetship scheme has been establishing itself as a major contributor to commissioned man-power. Cadetships are awarded, after selection on the basis of personal and academic qualities, to those about to enter university or already there. The undergraduate is appointed and paid as an acting pilot officer while he is studying, and becomes a member of his University Air Squadron. After obtaining his degree, he passes on to flying and professional training in his normal Service environment and thereafter is absorbed into the General List more or less pari passu with his Cranwell contemporary. At the time when the all-graduate policy was reaching the point of decision, there were about 150 university cadets in residence at universities. Their number had reached such proportions that contraction might soon be necessary either at the universities or at Cranwell. From there, it was not a difficult step to decide that one of the two methods of recruitment should be replaced entirely by the other; and when it came to deciding which was to go, national expansion of tertiary education coupled with the need for economy dictated that the universities, not Cranwell, were the logical provider of the graduate recruits we need.

All this is now passing into history; but how is the decision affecting the College at present? To see Cranwell life ostensibly going on today as it always has, one might be excused for imagining that nothing had changed at all. But the MOD (Air) instructed as long ago as September 1968 that, in anticipation of eventual Air Board agreement, preparation for the changes was to start immediately. With No 99 Entry due at the end of that month, the College received the following directive:

> The prime purpose of the first year of training for the members of No 99 Entry who are not engineers is to equip the maximum number of flight cadets to find places in civilian universities, colleges and the engineering degree course at Cranwell. Other considerations are to be subordinate.

Of the 150 or so destined for No 99 Entry, 18 who were holding offers of university places took them, with university cadetships and much encouragement, without ever coming to Cranwell. 41 were bound for the Cranwell engineering degree course. The remaining 90 were assembled in College Hall on the Sunday evening of their arrival, expecting probably to hear a standard speech of welcome. Instead, the Assistant Commandant (Cadets) told them that they could choose between taking the standard Cranwell course and going to university after all, and that they had three weeks in which to make up their minds. The decisions were agonisingly difficult to make - What were their chances of a university place? How would the decision affect their careers? What would happen if they failed at university? What should they study? These and a hundred other questions were discussed between staff and flight cadets, headmasters and parents, day in and day out for three weeks. In the end, about 60 decided to try for university and 30 to stay for the standard flight cadet course.

The business of finding university places for the 'pre-university stream,' as it was named, was a branch of staff work new to the Service. Although the university term had already started, some diligent detection found immediate university places for 12 cadets who were cleared and transferred to university cadetships in a matter of days. The remainder of the pre-university stream started a wholly academic year at the end of which they were to re-sit two GCE A-levels in which they had previously failed or obtained only low-to-medium grades. Applications for university entrance in October 1969 were completed with the help of headmasters and sent to the Universities' Central Council on Admissions (UCCA) during November and early December. No restriction was placed on the choice of degree subjects, although some effort was made to select studies which would be of tangible benefit to the Service. University cadetships are tenable for three years and, because Scottish universities provide in the main four year courses, there were problems in finding suitable degree courses for Scottish applicants.

The final results of the pre-university year cannot be foretold with complete accuracy at the time of going to press, but about half of the applicants have already received and accepted unconditional offers of university places. This is a very much higher proportion than the national average, reflecting on the fact that the Cranwell applicants, unlike most sixth-formers, already have a clutch of A-levels 'in the bag.' (It might also reflect a liking by universities beset by student troubles for candidates with a Cranwell background.) Of the remainder, all but three have received conditional offers from universities which they may or may not satisfy by their performance at A-level in June. Additionally, certain selected polytechnics and technical colleges, notably Portsmouth College of Technology, have made generous offers of places at minimum entrance requirements as a fall-out option for those who do not obtain a university place. In fact, only four candidates remain without an unconditional offer from either a university or a college, and even they have relatively easy conditional offers. With these offers now held and the UCCA clearing scheme to come, all but four of the pre-university stream are certain of a place on a

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July 1969 - The Graduate Entry Scheme (2)

degree course in October, and there is a good prospect that all will find a place. If any are left over in October without a place, they will return to the No 99 Entry standard course by means of a special shortened academic course. Summing up the probable results of the year, of the 150 starters all but the 30 flight cadets taking the standard Cranwell course and the handful who, for various reasons have been discharged from the Service will have found a place on a degree course either at a civilian institution or on the CNAA Engineer degree course at Cranwell. Such a result will represent a considerable achievement in an operation which started at extremely short notice and which is wholly unprecedented in the history of the College.

What of the future ? Now that Spring entries have ceased, No 100 Entry will assemble in October 1969. In overall numbers it will be similar to No 99 Entry, but as many as possible will be encouraged to take university places straight away without coming to Cranwell. Subtracting the Engineers, there will be a reduced number who will have the same choice as No 99 - to join the pre-university stream or to take the standard Cranwell course. Looking further ahead to October 1970, it appears virtually certain that No 101 Entry will be treated in the same way as Nos 99 and 100. Thereafter, it is anticipated that the university scheme will be so well established that it can absorb the whole of succeeding years' intakes, and the College's training pattern of the past 50 years will thus draw to a close. In its place, Cranwell will give reality to a new vision which is just as much in keeping with Lord Trenchard's original concept. With its airfield complex, fine buildings and unrivalled facilities, it is obviously ideal for bringing together all graduate entrants to the Service for their professional training, and so to give them the unique Cranwell stamp. Much discussion of the details remains to be done, but there will be every scope for the College to contribute as vitally to the security of the nation in the future as it has done in the past.

One cannot close this chapter without commenting upon some of the risks and drawbacks of the change to graduate entry. One question is uppermost in the planners' minds : will we be able to recruit enough graduates to meet our needs ? There is no easy answer - the lures of industry and the professions are great - but experience during the interim years of Nos 99, 100 and 101 Entries will provide the clues, and results will be closely monitored. Once the scheme is established and widely known, it should attract the very best men just as Cranwell has done in the past. Fears that Service pay double or treble the normal university grant will attract the wrong type of recruit can easily be rendered groundless by the Selection Boards. Our eggs are now firmly in the universities' basket, and we must see that they are not addled. Another question is on a more personal level ; what of the academically less gifted young man of great personality whose contribution in the past has been so significant ? A university degree is beyond his reach, yet we shall continue to need him. However, since the all-graduate policy applies only to the direct-entry permanent commissions, there will be plenty of scope for this young man to enter by a variety of short-service options and, if he proves his worth, transfer to full career terms.

Finally, the biggest unknown of all what will university life do to our men ? We know the Cranwell product well, and have every reason to place reliance and pride in it, but our experience of graduates is more limited and most of those we have were recruited after, not before, their degree courses. On the credit side, we may expect broader minds, greater capacity for complex reasoning, and a better grasp of dialectic. The only likely debit is in the field of personal qualities, and here we might pinpoint two danger areas - the ' political ' trap and the ' wine, women and song ' trap. On the ' political ' side, our cadets will be almost unique in having active career ambitions, and this should be incentive enough for them to avoid any political involvement of an undesirable nature. We have no KGB in this country, but that does not mean we have no interest in security risk. The ' wine, women and song ' trap is different - the student is his own master for the first time, and some are weaker than others. Certainly there will be more temptation at universities than in the rigid, all-male atmosphere of Cranwell. But all young men, traditional Cranwell products included, become their own masters at some stage of life, and it is perhaps better that they learn their lessons before they bear full Service responsibilities. We may expect on the one hand greater intellectual breadth and capacity, on the other a loss of the standard mould that has shaped the high standards of the old-type Cranwell flight cadet. The breaking of chains does not dictate the direction in which the captive will escape, but we have every reason to hope that the good sense and integrity of our chosen men will steer them through.

There are problems, and serious ones at that, but no one will deny that the Royal Air Force is moving boldly to match its highest level of recruiting to the highest level of potential manpower. The Cranwell we know may go, but a new Cranwell is being created out of the old which will continue the proud traditions and high standards of its illustrious forebears and which will be as well tuned to the needs of its time. Superna petimus indeed.

UNIVERSITY ENTRIES AT CRANWELL

The following announcement appeared in the magazine ' Aeroplane ' on 31st September, 1934 :

In future, all officers who are appointed to permanent commissions in the R.A.F. from the Universities will be trained at the R.A.F. College Cranwell, instead of at one of the Flying Training Schools. The first entries under this scheme were posted to Cranwell on September 29.

University candidates for permanent commissions must be under 25 years of age, have taken a degree after three years' residence, and have been recommended by the governing body of a recognised university. After passing the Medical Board at the Air Ministry they are attached to a flying unit during the long vacation. If the Commanding Officer's report is favourable they are granted a commission and posted to a flying establishment and given twelve months' seniority.

University entries normally have five months' flying training instead of the ten months given to those appointed to short-service commissions.

THIRTY YEARS ON

by Flight Cadet J. B. S. HILTON

' That the pattern may subsist for the pattern is the action
And the suffering, that the wheel may turn and still
Be forever still '

That was T. S. Eliot's way of remarking that History repeats itself, that it is not life that changes, but our reaction to it. Apply his remarks to at least one aspect of life at the College itself and he may well have had a point.

Much has already been said and will continue to be said about the future of Cranwell. We know that in its present form it will cease to exist - whether this is for better or worse is not given for us to question. Today's flight cadet becomes tomorrow's ' Aerocrat ' - beautiful jargon, beautiful but virtually meaningless. What will these ' Super Cadets ' gain from life over and above the ordinary flight cadet ? A simple enough answer - a degree, the product of a University training and a necessary requirement for entrance to the College. In present-day terms these cadets will be special, a subject for close scrutiny in the coming years. However, they are not pioneers in this field.

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Leaving aside the entrance to the Royal Air Force already afforded by the University Cadetship scheme,. a policy such as is envisaged did exist once, 34 years ago, i.e. at the end of the first quarter of the College's existence. This highly original scheme lasted 18 months and only three entries profited from the experience.

The first post-graduates, fresh from University, unaware of Air Force life, entered the College on the 29th September 1934 with only a few members and graduated from Cranwell six months later.

The second party of postgraduates arrived between February-April 1935 and graduated at the end of Summer 1935, whilst the third group arrived on the 1st October 1935. When they left in March 1936, Cranwell had lost interest in the scheme, which was dropped altogether. Why ? The fairest answer seems to be that the graduates were too old for the other cadets but not old enough for their instructors and therefore never managed to identify themselves with either group. A great pity, but prejudice rears its head in strange places. Whether this was the actual reason the scheme was dropped, there is not information available to say.

When the University Cadetship scheme was inaugurated, this by-passed any such difficulties. Unfortunately the scheme meant that very few of the graduates saw the inside of Cranwell as we do. Again this is a great shame, since anyone entering the Royal Air Force should at least have the opportunity of seeing the other Air Force, and its training.

The future scheme will presumably by-pass all the past problems besides raising a few of its own. All the cadets will be post-graduates together with the benefits of a Cranwell training in leadership : an ideal combination for one desperately trying to reach the upper echelons in a service career. It is only a pity the move comes after a break of 34 years.

Did the post-graduates of 1934 gain anything from mixing their training ? Will the future cadets gain anything ? It is unfair to criticise a scheme that failed on technicalities, technicalities which may never arise again, in a scheme envisaged to supply the Royal Air Force with officers for the rest of its independent existence. Whatever is said at this early stage is likely to stem from mere philosophical thought, to be laughed at by those who have managed without degrees, and possibly sympathised with by those who have succeeded either because of or in spite of these qualifications. Next time you look through the photographs in College Hall look for three Courses in particular ; try to imagine what life at Cranwell meant for those Graduate Cadets as they look down at you : in 1979 look at the photographs of their successors. Only the names will be different. The experience revealed by their faces could well be the same.

' That the pattern may subsist,' as it has.
' For the pattern is the action and the suffering ' and the experience.
' That the wheel may turn,' as it is.
' And still be forever still,' as it will be, eventually.

PRE-WAR GRADUATE ENTRY COURSES

No 1 : B. Ball, B. R. Burnett, R. F. A. Edleston, F. G. Frow, J. D. Hinks, J. C. MacIntyre, R. E. A. Traill.

No 2 : W. G. Bannister, W. F. Beckwith, G. H. Foss, P. E. Hadow, R. A. I. Harrison, E. A. Howell, P. B. B. Ogilvie, P. J. Sloan.

No 3 : T. F. Barker, J. C. Bevan, B. H. Boon, G. Cornwall, D. M. H. Craven, L. Dadswell, J. R. A. Embling, A. R. Fane de Salis, N. Fisher, A. Foord-Kelcey, G. W. Peel, B. J. R. Roberts, K. B. F. Smith, F. W. Thompson, T. W. K. Walker, W. P. Whitworth, A. B. Rae.

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DEPARTMENT OF AIR WARFARE

A Surface to Air Missile scores a direct hit on target aircraft.

THE DEPARTMENT OF AIR WARFARE

The Department of Air Warfare was formed in January 1974 following the closure of the Royal Air Force College of Air Warfare, Manby. Described below is the historical background to the Department, its current organization and activities.

HISTORY

The Department's history started in 1938 when Manby was opened to become the home of No 1 Air Armament School, tasked with the ground training of armament officers, instructors and aircrew and the air training of air gunners and bomb aimers. Although the title of this school and its organization were subsequently changed, Manby remained the home of armament training and it was traditionally associated with air weapons throughout the last war and the period immediately after it. At the end of 1944 the unit was renamed the Empire Air Armament School.

In 1949 the Air Council reviewed the work of the Empire Schools. It was then decided that appropriate aspects of the work of the Schools should be combined to form a new establishment at which specialised training would be provided for General Duties officers, commensurate with the future needs of the Royal Air Force. Thus the Royal Air Force Flying College was formed at Manby in July 1949, within Flying Training Command, and with the following charter :

> 'The fighting efficiency of the Royal Air Force derives in special measure from the personal skill, knowledge and experience of those who command flying units or who are concerned with the operation of aircraft in all weathers. The Royal Air Force Flying College has therefore been established to give selected officers a practical course in flying in all weather conditions and in navigation and the use of weapons, so that they will be able by their own knowledge and example to train those under them in the most effective use of aircraft as weapons of war.'

With the aims of the charter in mind, the emphasis of the Flying College Course was placed equally on theoretical and practical aspects of air warfare. Potential commanders and staff officers selected for the Course studied the implication of new doctrines and modern navigational equipment and weapons, with particular emphasis on their proper employment in strategic and tactical air operations. Most important, students and staff then had the opportunity to see for themselves, by practice in the air, the advantages and limitations of various aspects of their studies.

COLLEGE OF AIR WARFARE

This Flying College Course was short lived. By 1956 the courses were flying Canberra and Hunter aircraft, but the cost of replacing these aircraft and their ground services with the complex and expensive types then coming into front line service precluded the furtherance of this most effective training ideal and it was decided, with reluctance, that the last Flying College Course would complete its training in December 1960. The College then became known as the Royal Air Force College of Air Warfare.

Concurrent with the establishment of the Flying College Course, other courses had taken up residence at Manby where they could take advantage of the facilities offered by the College. Of these, the Specialist Navigation Course, which has since developed into the GD Aero-Systems Course, was the first to arrive from Shawbury in 1952. General Duties Guided Weapons Courses started in 1956; these were the first of a succession of GD Weapons Courses which, under the current title of Weapons Employment Courses, were completely trained at the College. The Staff Navigation Courses were absorbed into the College from Shawbury in 1963.

As part of the campaign to conserve material and financial resources, the College moved to Cranwell in January 1974 to become the Department of Air Warfare. The Dominie Squadron, which supports the flying aspects of the GD Aero-Systems and Staff Navigation Courses, moved concurrently.

The Assistant Commandant (Air Warfare) is responsible for the conduct of all Departmental courses. To achieve this task he has a

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staff of 44 officers who, together with supporting services, occupy part of Whittle Hall. The Assistant Commandant is also responsible for the administration of three other units that moved from Manby: the AP 3456 Editorial Staff, the Training Command Aircrew Categorisation Staff and the Command Examination Board.

The Department staff is drawn predominantly from the Royal Air Force, but includes officers from the Royal Navy, Canadian Forces, Royal Australian Air Force and United States Air Force. The staff work as a number of cells, each of which has a specific field of interest: Operational Studies, Aero-Systems and Navigation, Weapons and Astronautics, and Applied Sciences and Electronic Warfare.

It is from this pool of expertise that instructors are allocated to specific courses and for specific topics. The cross-fertilisation of knowledge engendered by this system provides a most effective and productive service to all courses and at all levels and is the *raison d'etre* for the concentration of such a wide variety of courses under a common roof.

COURSES

Today there are four major courses within the Department: the Air Warfare Course, General Duties Aero-Systems Course, Staff Navigation Course and Weapons Employment Course.

The senior course held by the Department is the Air Warfare Course, the successor to the Flying College Course and retaining precisely the same aims as the original course. The flying experience hitherto offered by the College has necessarily been replaced by some limited flights in front line aircraft during Course visits to operational stations; the scope of the syllabus has been increased to include more comprehensive aspects of air operations. The Air Warfare Course currently runs for five and a half months and two courses are held each year. The Course is open to officers of the Royal Air Force, Royal Navy, Army Air Corps, Canadian Armed Forces, Royal Australian Air Force and the United States Air Force. There may be an officer from each of these Services on every course; there are places for officers of the Royal Air Force Engineering Branch and the Royal Air Force Regiment. There are 16 to 18 students on each course; the senior student is a Group Captain, the remainder being of Wing Commander equivalent.

The student body is divided into two syndicates balanced as far as possible to make the most use of the experience available. Each syndicate is controlled by a Wing Commander Directing Staff, who acts as syndicate leader and the two are ultimately responsible for the content of the syllabus and its regular review. The syndicate leaders are directly responsible to the Group Captain (Air Warfare) who is the Senior Directing Staff of the Air Warfare Course.

The Course comprises three main phases: a basic studies phase and two operational studies phases.

The basic studies phase is an intensive period of formal lectures aimed at the revision of basic academic notions and the creation of a common foundation for the remainder of the syllabus.

OPERATIONAL PHASE

The first operational phase lasts for 12 weeks and concentrates on all spheres of air warfare within Europe. It includes a week's visit to the NATO forces in Central Europe. The culmination of the phase is the presentation by the students of their solutions to problems related to air operations in this region. To this guests from both NATO and the Royal Air Force are invited.

The second phase of the Course is shorter and follows a similar pattern, but the emphasis of the studies is now towards Theatre Operations and Joint Operations, and includes a visit to the Joint Warfare Establishment. In this section of the Course students study NATO flank operations.

Each of the operational phases contains a comprehensive study of the available weapon systems and their capabilities and includes an appraisal of possible threats and of strategic and political implications in the areas concerned.

The Course visits a number of operational stations at home and visits are also made to industry and establishments associated with the employment and development of weapons systems. A number of visiting lecturers, including senior Royal Air Force officers from the Ministry of Defence, Defence Establishments, industry, and the Commands address the Course at appropriate stages. The Course concludes with a series of lectures on various aspects of Royal Air Force policy.

It may fairly be said that students of the Air Warfare Course, in just under six months, have an unrivalled opportunity to examine the tasks and capabilities of all the operational units of the Royal Air Force and to relate them to the whole broad spectrum of Air Warfare and its implications at present and in the foreseeable future.

AERO SYSTEMS COURSE

The General Duties Aero-Systems Course was introduced in 1968, having evolved from the Specialist Navigation Course. It is designed to give selected officers with flying experience the background to be technically competent to play a major part in the planning, development, procurement, testing and operation of new aircraft and equipment for the Services.

The length of the Course is one year, and the 24 students are selected from officers of the ranks of Squadron Leader and Flight Lieutenant. The Course is open to all aircrew categories and normally includes officers from the Royal Navy, RAAF and USAF. Officers from other NATO countries and RNZAF officers also attend from time to time. This year's course includes, for the first time, students from Germany and Italy; such participation is likely to increase in the future with the introduction of the tripartite MRCA.

During the first half of the Course the students study in depth those basic academic aspects necessary for the subsequent detailed investigation of current and future systems and equipment directly related to the requirements of national air defence. Subjects in particular are Mathematics, Statistics, Computing, Control Engineering, Guidance and Avionics. Additionally the students have the opportunity to become familiar with current navigation equipment and modern evaluation techniques during flights in Dominie aircraft. A Polar flight is undertaken in a transport aircraft of Strike Command which is specially equipped for the sortie with a variety of gyro instruments, avionic equipment computers and inertial systems, all of which are evaluated during the mission. Equipment on this year's flight included three inertial navigation systems together with automatic Omega and Loran receivers. The Department is greatly indebted to industry and the Defence Establishments for their assistance in these flights and for the opportunity to evaluate new equipments in the R & D stage.

The latter half of the year is spent in making a study of air operations, the aviation industry and research and development establishments in this country and North America. To achieve the latter, each course spends almost three weeks in Canada and the United States, giving its members a unique opportunity to study the development and the operation of aero-systems at US Air Force, US Navy, Canadian Forces and North American aerospace manufacturers' establishments.

On graduation, the students fill appointments in Ministry of Defence headquarters and establishments and in operational headquarters throughout the Royal Air Force. There are a number of exchange posts with the CF, RAAF and USAF.

STAFF NAVIGATION COURSE

The Staff Navigation Course was formed in 1942. The purpose of the Course is to give experienced air navigators a wider and deeper knowledge of air navigation in all its spheres so that they are qualified to become navigation instructors or to fill navigation staff appointments.

Five courses are held each year. The work on the course is intensive and lasts for 17 weeks, in which students are refreshed in Mathematics and Physics, and study Avionics, Meteorology, Guidance and Applied Navigation in detail. The students are also given an introduction to new navigation systems and those under development. The flying on the Course is carried out on Dominie aircraft where the students practise less familiar and advanced navigation techniques. The emphasis on the practical side is one of broadening technical expertise so that, for example, the tactical low-level navigator may find himself taking astrosights for the first time in many years, the maritime navigator will find himself employed in low level map reading.

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The Staff Navigation Course draws students from officers of all Commands of the Royal Air Force and from the Royal Navy. Officers from the other Air Forces, notably those of Germany, India, Kenya, Pakistan and South Africa, have been included in recent years.

WEAPONS EMPLOYMENT COURSE

The Weapons Employment Course started in its present form in 1967 with the task of providing General Duties officers of the ranks of up to Wing Commander, with a grounding in the proper use of air weapons so that they might fill responsible posts in the weapons field throughout the Service. Within the eight weeks of the Course students study present and future weapons of the Royal Air Force, their capabilities and limitations and their lethality and effectiveness against a wide range of targets. In order to meet this task, the students must also gain an appreciation of the capability and performance of the aircraft in service with the Royal Air Force, the navattack systems, the performance of all types of radar systems and the types of operations and differing environment in which the Royal Air Force may be required to function. During the Course visits are arranged to establishments and civil firms involved with the development of weapons systems and to operational units in this country. Recently USAF and RAAF officers have attended this Course.

Other than the four major courses held within the Department, there are a large number of briefing periods, mainly for senior officers of all three Services. The courses last from two and a half days to a fortnight. During these short courses a concentrated programme is provided with the express purpose of assisting participants to become familiar with contemporary roles and equipment of the Royal Air Force, the employment of air weapons, electronic warfare and developments associated with space.

ELECTRONIC WARFARE

Electronic Warfare Study Periods are held separately for NATO senior officers, including senior commanders of land, sea and air forces, senior commanders of the British Services and staff officers. The courses cover a detailed study of all aspects of electronic warfare.

WEAPONS STUDY

Senior Officer Weapons Study Periods deal with the combat capabilities of the Royal Air Force, and the use, effectiveness and limitations of current and future weapons systems. The air aspects of recent conflicts are also covered. Separate study periods are held to provide briefings on UK defence matters for senior officers destined for appointments abroad or with other Services.

The remaining study periods cover aerospace. They are held to acquaint senior officers with the latest developments in the military and civilian use of space and space vehicles.

BRIEFINGS

Briefing teams from the Department frequently give presentations to military and civilian establishments in this country and abroad. However it is probably the Department's "Royal Air Force Aerospace Briefing Team" that is most familiar to officers within the Services as well as to many civilians. This team was first formed in 1962; the members are drawn from the different sections of the Department and, over the years, they have given countless aerospace presentations throughout the British Isles, Europe and Asia to military colleges, professional bodies and universities.

Over 450 officers of rank of up to Air Chief Marshal have passed through the Department within its first year of integration within the Royal Air Force College. This period covered about 30 courses, study periods and symposia of duration of between a day and a year. Students and staff have enjoyed the excellent facilities available within York House Mess, which is now used solely by the Department.

The Department of Air Warfare is now firmly established at Cranwell and both staff and students are proud to be members of the Royal Air Force College.

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No 27 AIR WARFARE COURSE, JANUARY-JUNE 1974

Back Row : *Lt Col M D Thom, Wg Cdr J J R Cohu, Wg Cdr R G Smalley, Cdr G A I Johnston RN, Wg Cdr T S C Jones, Wg Cdr J M Alcock, Wg Cdr P F Hobley, Wg Cdr S Hitchen*

Front Row : *Lt Col F S Hudson USAF, Wg Cdr G M A Hines, Wg Cdr N A D Nugent, Gp Capt W F Knapper, Gp Capt P G C Wilson, Wg Cdr J A Rixom, Wg Cdr B M Burley.*

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No 7 GENERAL DUTIES AERO-SYSTEMS COURSE, JANUARY-DECEMBER 1974

Back Row : *Flt Lt D C Travers, Flt Lt H Wainman, Flt Lt D W Smith, Flt Lt R J Scrivener, Flt Lt P Kelly, Flt Lt G D Aram, Flt Lt A L C McIntyre, Flt Lt D Pike.*

Centre Row : *Sqn Ldr S F Gallagher, Sqn Ldr P D R Jolly, Flt Lt J F Callaghan, Flt Lt R E Byfield, Flt Lt B W Johnson, Flt Lt J D Martin, Flt Lt T Miles, Flt Lt K G Logan*

Front Row : *Capt W C Lamont USAF, Sqn Ldr D J Charles, RAAF, Lt Cdr P Torchalla GNY, Lt Col A Bortolin IAF, Sqn Ldr P J Hogdson RAAF, Sqn Ldr R J Klitscher RNZAF, Flt Lt R K Craigen, Flt Lt R A Greathead.*

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THE DEPARTMENT OF AIR WARFARE

GD Aero Systems Course—Exercise Far North

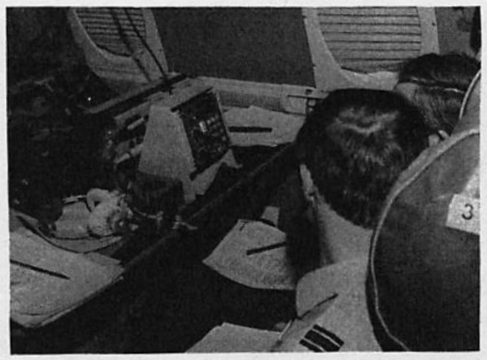
During 1974 the Department of Air Warfare successfully staged Exercise Far North for the 13th consecutive year. The exercise, which is an annual event in the GD Aero Systems Course calendar, is designed to give the students practical experience of modern navigation equipment operating in high latitudes. A specially fitted Britannia aircraft is employed and 2 training flights into the north polar regions are staged. These flights route initially from Brize Norton to Stornoway and then across the North Atlantic and the Greenland ice-cap to Thule: the most northerly link in the Ballistic Missile Early Warning System (BMEWS). After a night stop at Thule, the aircraft heads north to the Pole before returning to Brize Norton; the complete exercise is then repeated with an entirely different crew complement. Exercise Far North involves months of planning and close liaison with the avionics industry and R & D establishments whose representatives accompany their equipment on the flights. To give an appreciation of what is achieved this article describes the 1974 exercise.

Three Ferranti Digital Inertial Navigation Systems (INS) were fitted. These systems, derivatives of which will be installed in MRCA, are developments of those fitted in the Phantom and Harrier. They included a prototype model, an A model loaned by RAE Farnborough, and a B model loaned by the Ferranti Company. The B Model INS was used as the primary datum equipment for position and heading.

The azimuth outputs from several gyros were available for comparison against the datum; these included 2 Sperry twin-gyro platforms together with a CL11, C12, and a CL22 gyro. Hence the directional gyros used in the Lightning, Buccaneer, Vulcan, Dominie, Hercules and several other aircraft compass systems were represented. The Smith's Flight System and P12 compass fitted in the Britannia were also included in flight evaluations.

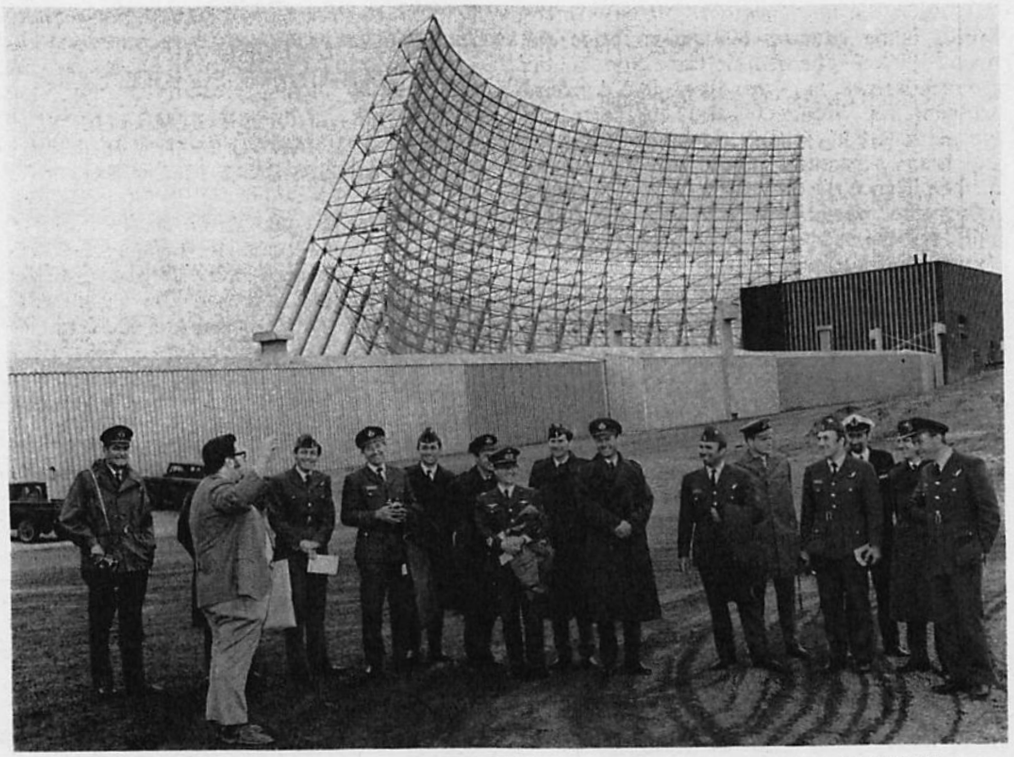
Omega and Loran long range navigation aids were also carried. The Loran receivers were Decca ADL21 semi-automatic equipments, and a Decca ADL81 fully automatic unit loaned by the Company. Marconi-Elliott loaned an AD1800 Omega receiver which, in addition to signal readouts, continuously computed and displayed aircraft position as either latitude and longitude, or as steering information to any desired position.

Other on-board equipment included a variety of Hewlett-Packard pocket calculators HP 9100A and HP 9810A programmable calculators and a crystal clock. The calculators, loaned by the company, were used to determine apparent gyro drift and to convert Loran readings into latitude and longitude.



One of the inertial navigation system evaluation positions

Installation of equipment in the Britannia started 4 days before the flight when the aircraft was taken off line for pre-flight preparation. The seats were removed and, to meet the various power requirements, extra inverters were fitted at the rear of the aircraft; from these supply cables were strung along both sides of the passenger compartment. The equipment was mounted on tables fitted both sides of a central walkway. Four of these tables had been specially constructed to accept palletized gyros, Loran receivers, and IN systems. Two days before the flight the manufacturers' representatives arrived and installed their equipment at the stations provided. The final stage in the preparation was then completed by running all the systems on aircraft power.



"Mitch" Mitchell, a senior engineer at Thule, escorted the party through BMEWS. In the background is one of the 165ft by 400ft aerials.

The aircraft was airborne on schedule and the staff and students settled down to their tasks. At regular intervals during the flight they changed positions around the equipment stations so that everyone had an opportunity to use each item. At every station specially prepared data sheets were used to manually record the readings from the equipment. It was essential that all readings were taken simultaneously, so every 15 minutes a co-ordinator would count down to the recording time using the crystal clock. Inertial and gyro readings were compared with the datum to detect Schuler oscillations of the inertial platforms and to determine the real drift of the gyros. An in-flight record of the real drift of all gyros was plotted on a large, colour-coded graph. It provided an interesting and continuous comparison of their relative performance. The Omega and Loran positions were recorded and compared with the datum position.

During their time at each of the stations the students were shown how to operate the various systems by the manufacturers' representatives. The ensuing discussion was a valuable training aspect of the flight. Naturally enough there was a friendly rivalry between the representatives as to whose equipment was most accurate when the various systems gave different versions of the calculated aircraft position. However, the average error rate of the datum INS over the flights was less than 0·8 nm/hr.

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1975 - Department of Air Warfare Articles (2b)

Thule is the most northern air base in the world, being situated 690 miles inside the Arctic Circle. The frozen condition of the ground, known as perma-frost, is a constant problem for architects and engineers. If the perma-frost melts it no longer supports any heavy structures placed directly on the surface. Hence the runway is painted white to reflect the warmth of the sun and most buildings are supported on piles several feet above the surface. Large buildings like hangars, which must be built on the surface, have ventilating chambers below the flooring in which cold air is circulated thereby preventing melting of the perma-frost.

A conducted tour of the BMEWS was included in the visit. The radar installation is of impressive proportions; for example, the 4 fixed aerials are each as big as a football pitch and are built to withstand winds in excess of 200 knots. From the BMEWS site one has a panoramic view of coastal icebergs and snow-covered peaks and the meeting of 3 glaciers in the nearby fiord provides a unique geographical feature.

The tour of BMEWS provided a useful consolidation of many hours spent in the classroom. The system incorporates aerials, waveguides, electronic devices, computers and displays on a majestic scale. A demonstration of an alert situation was very impressive.

After the tour came time for relaxation. At that time of year night did not come to Thule and it was a startling experience to leave the 'Top of the World' Club in the late hours to be greeted by bright sunshine.

The next day the Britannia was airborne again heading north, and the recording cycles were recommenced. It was interesting to note the error —45° — in the Britannia's P12 compass as the flight neared the magnetic pole. The INS faithfully logged the increasing latitude as the aircraft passed overhead Alert at 82° 31′ North and eventually 90° 00′ North, 000° 00′ East/West; the North Pole had been reached. From the Pole the Britannia turned South — it couldn't go in any other direction — along the 6° West meridian towards Brize Norton and home.

Exercise Far North is a very important part of the GD Aero Systems Course syllabus. It provides a unique opportunity for students to gain experience in using modern aero-systems, many of which are in an early stage of development, and to discuss system details with manufacturers' representatives. The flights are also held in high regard by the manufacturers who are able to evaluate their equipment under most testing conditions. This point is underlined by their continuing enthusiasm and readiness to provide equipment and manpower in support of the exercise. The systems evaluation techniques employed serve to augment the flight trials training given to students on the course and, furthermore, a large amount of useful data is collected. This data is collated and analysed after the flights and a comprehensive report is prepared and distributed to the manufacturers who provide the equipment and to interested units within the Service and the R & D establishments.

No 8 GD Aero-Systems Course.
January-December 1975

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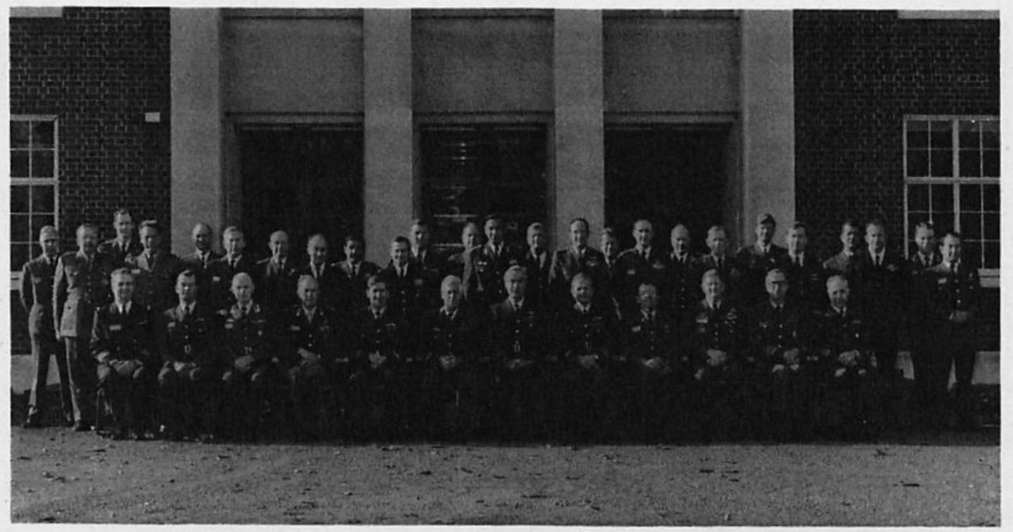
1976 - Department of Air Warfare Articles (3a)

Electronic Warfare Training in the Department of Air Warfare

In almost every facet of military operations today, armed forces depend to a greater or lesser degree on electronics. A strike aircraft, for example, relies largely on electronic devices for its communications, navigation and weapons delivery systems. The air defence networks, in opposition, have a similar requirement to ensure that the anti-aircraft artillery, surface-to-air missiles and fighter aircraft can be brought to bear effectively on a penetrating force. In the maritime sphere, the anti-submarine aircraft is almost totally reliant upon electronic devices to locate and destroy the submerged enemy submarine. It is essential, therefore, that at every level of command, and in every role, the special problems and vulnerabilities of military electronic systems are fully appreciated. In the Royal Air Force we must know not only how to protect our own systems from enemy interference but also how best to interfere and degrade the enemy's electronic systems. This is the business of Electronic Warfare (EW), and one of the vital functions of the Department of Air Warfare is to train officers of all ranks in the fundamentals and applications of EW techniques.

Interestingly, this is by no means a new task for the Department, but rather a task on which a renewed emphasis has been placed in very recent years. Although the history of EW can be traced back to the pre-1914/18 war days, the subject really came of age in the 1939/45 war when opposing forces began to rely substantially on their radar and communications networks. Perhaps the greatest single success ever achieved in the EW field was during the attack by Bomber Command aircraft on Hamburg on 24 July 1943. On that occasion, a force of 791 aircraft was tasked to attack that very well defended city—a task which under normal circumstances would have resulted in the loss of at least 50 aircraft. However, unknown to the German defences, each aircraft had been briefed to drop "window" (or "chaff" as it's known today) as it approached the target area. "Window" consisted of strips of aluminium foil designed to produce false radar echoes on the air defence radar screens — thereby confusing the operators. The device had never been used before operationally but, during this one raid, approximately 40 tons of "window" (92 million strips of aluminium foil) were dropped. The tactic was very successful and the aircraft loss rate was reduced to 1·5 per cent (12 aircraft of the 791).



NATO SENIOR OFFICERS' ELECTRONIC WARFARE COURSE

Wg Cdr Mansfield, Col McInerney, Col Merritt, Col Miller, Col Mitri, Col Nardini, Col Reagor, Col Schauder, Col Schneider, Col Schwenke, Col Skydsberg, Col Venetsanos, Col Width, Col Deville, Col Domenech De Celles, Col Evertse, C V Farand, Col Frapier, Col Guelzow, Col Harrington, Col Johnson, Col Lauderdale, Col Mahlberg, Col Malaganne, Gp Capt Maloney.
C V Brusson, Gp Capt Carver, Brig Ulleberg, Brig Gen Numan, Air Cdre Rogers, Maj Gen Geschiere, AVM Colahan, AVM Lamb, Brig Gen Hoffman, Brig Gen Sanderson, Col Chatelle, Col A'Antonio.

The Royal Air Forces experience and expertise gained in EW during World 2 was later carried over to the "V" force era, and the Valiants, Victors and Vulcans all carried EW equipments to aid their high level penetration sorties into enemy airspace ; indeed, one Valiant squadron was employed as a specialist EW unit. During the mid 1960's however, tactical concepts were changed to take account of the newly deployed surface-to-air missile systems, and the emphasis was changed to penetration at low level, below enemy radar cover. Hence, EW techniques were temporarily of much reduced importance, and interest in EW waned drastically.

The advent of the surface-to-air missile also had a significant effect on the concept of operations for tactical aircraft. Until the Vietnam war, it had never been considered necessary to equip tactical aircraft with EW systems. However, United States Air Force losses to surface-to-air missiles in Vietnam caused a rapid reappraisal of the situation and, before long, United States tactical aircraft were equipped with both passive and active EW devices to enable the aircrews both to detect and "jam" the missile electronic control systems. The reappraisal was not, of course, confined to the United States Air Force ; air forces world-wide realised that a new era had arrived and that a considerable amount of money would need to be spent on EW equipments and training if tactical aircraft were to remain viable. This latter viewpoint was strengthened further by the experiences of the combatants in the 1973 Arab-Israeli war, in which extensive use was made of EW equipment and techniques.

The Royal Air Force, for its part, was not slow to realise the implications of the Vietnamese and Middle East experiences. In addition to the procurement of EW equipments (a subject which is beyond the scope of this article) it was clear that a training scheme would be required to train officers at almost every level of command in the principles and techniques of EW ; moreover, this training in many cases would need to be pitched at ab-initio level. Accordingly 3 major categories of officer were identified. Perhaps the most important were those officers in front line squadrons and air defence units who would be expected to employ — or combat — EW techniques in their day-to-day operations. Then there were the staff officers who would of necessity become involved in providing EW advice, thereby extensively influencing the decisions made on EW. Thirdly, it was essential that senior officers and commanders should understand the basics of this very complex subject because of their direct involvement in the many important decisions that would need to be taken.

Thus it was that the EW courses provided by the Department of Air Warfare evolved. Prior to 1971, the main EW instruction in the Department had been confined to a few lectures given routinely to the various in-house courses, together with an annual requirement to run a course of one week's duration for NATO Senior Officers.

With the advent of the new training requirement, three new courses were introduced. The first of these, the Electronic Warfare Officers' Course (EWOC) was designed to fulfil the needs of the front line units. Ministry of Defence policy in this was to ensure that at least one officer in each front line unit received sufficient basic EW training to enable him to organise training programmes for the other members of the unit. The course that has now evolved is of three weeks' duration and is held once per quarter. Twelve students attend each course, most of whom are detached from the unit on which they are destined to become the nominated EW officer. The course is divided broadly into three phases. First of all, instruction is given on the principles of radar, communications and EW. Next come three days of external visits to Royal Air Force stations of particular EW interest. Finally, visiting lecturers are invited to lecture in their individual fields of EW expertise. Overall, the course appears to be very popular with our students and it certainly evokes an enthusiastic response.

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No 31 Air Warfare Course.

Courses for staff and senior officers are, of necessity, very much shorter than the EWOC and more limited in their scope. The Staff Officers' EW Course is held once per year and is designed to meet the requirements of Wing Commanders and Squadron Leaders, together with the equivalent ranks of the other Services and Civil Service. The course, which is of 5 days' duration, caters for 40 officers. Again, it commences with a revision of the fundamentals, followed by a phase in which visiting officers are invited to lecture on specialised EW topics. The courses have always been well received by those attending — indeed, the most frequent complaint concerns the fact that there is only one course per year, and this limitation is now under review.

Courses for senior officers are of two days' duration and can really be more accurately termed "EW Study Periods". They cater for the ranks of Group Captain and above and, again, about 40 officers can attend, including officers of the other Services and the Civil Service. However, the maximum number attending in practice is normally between 20 and 25. The study periods follow much the same pattern as the staff officers courses but, in the shorter timescale, the lectures tend to be rather less detailed and a greater emphasis is placed on overall EW policy.

The EW course that imposes the greatest workload on the Department is the NATO Senior Officers' Course, held annually. This joint service course, which is of one week's duration, is open to senior officers of all NATO countries, including France. The students — usually between 35 and 40 very senior officers — arrive at Cranwell on the Sunday afternoon, ready for a Monday morning start. They descend on Lincolnshire from the far corners of Europe, some driving, some flying, and some by rail. During the ensuing week, the Department is transformed by the multitude of different uniforms, vast quantities of gold braid, and the sounds of 10 or more different languages — to say nothing of the smell of some very strange tobaccos.

For five days, the instructional and social programmes of the course keep the Department very busy indeed. However, the students obviously learn a lot and they are certainly appreciative of all the efforts that are made to make their stay enjoyable. All in all, running the course can be a very satisfying experience indeed — though there are just a few slight sighs of relief on the Friday evening when (and if) all the visitors have successfully caught the correct train/aircraft/car on their return journey.

Of course, the presentation of EW lectures is not limited to designated EW courses — indeed the Department's EW Specialist lectures to every student who attends a course in the Department with the exception of those on the Flying Supervisors' Course. He also ventures forth into several military establishments both at home and overseas and, during the past year, has lectured to students in Teheran and Copenhagen, as well as in more routine locations such as Bracknell, Blandford Forum and Shrivenham.

Finally, it must be emphasised that the success of the EW courses depends to a great extent both on the willingness of our visiting lecturers to come to Cranwell, and on the co-operation of the Royal Air Force stations that host the courses during their "walk-abouts". In this respect, the Department is extremely grateful to all the visiting EW lecturers (there are too many to mention them individually) and to the stations that host us so generously. For our part, we can only hope that our EW students are gaining the maximum benefit from their courses and that our efforts are helping to increase EW awareness throughout the Royal Air Force. Without such an awareness — and the equipment to go with it — the effectiveness of a modern air force must surely be degraded to an unacceptable level.

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1978 - SGIOT (1a)

SINGLE GATE INITIAL OFFICER TRAINING

In 1977 the Air Force Board decided that, in future, entry to commissioned service in the Royal Air Force would be through a 'single gate' located at the Royal Air Force College. Since then the phrase 'single gate initial officer training' (SGIOT) has become an essential and constantly recurring phrase in the vocabulary of all those involved in the formulation of future training plans. For an insight into the origins of this important development and an appreciation of the impact it will have upon the Cranwell scene, it is necessary to review some of the related events of the past 15 years and the current organization which has resulted from them.

The Royal Air Force Technical College at Henlow merged with the Royal Air Force College in 1965 to become the Department of Engineering located in the custom-built Trenchard Hall. Technical cadets lived alongside flight cadets and received their officer training in the Department of Cadets. The decision to discontinue both the Flight Cadet and the Technical Cadet Schemes in favour of the University Graduate Scheme led to the arrival in 1971 of the first university graduates to receive their initial officer training at Cranwell. The last of the old-style cadets graduated with No 101 Entry in March 1973.

The year 1973 saw another major development for the College. The Royal Air Force College of Air Warfare at Manby closed and the training conducted there was transferred to the new Department of Air Warfare (DAW) which opened at Cranwell in January 1974. Training accommodation for the DAW was made available in one wing of the Whittle Hall which underwent considerable modification in preparation for its new task. Previously, the area had contained laboratories and lecture rooms for the use of the old Basic Studies Wing, part of whose function was to provide a scientific and technical education for cadets. With the introduction of the Graduate Entry Scheme, it proved possible to reduce this commitment significantly and to transfer what remained to the Trenchard Hall.

To these and several other changes, the College has reacted by making the necessary adjustments in organization and redistribution of accommodation and facilities in order to provide for the expanded range of training activities now concentrated at Cranwell. Titles and taskings have changed quite rapidly, the Department of Cadets, for example, becoming the Department of Officer and Flying Training, before assuming its present title of the Department of Initial Officer Training (DIOT), and the Department of Engineering being replaced by the Department of Specialist Ground Training (DSGT). In view of the possible confusion, it may be advisable to remind the reader of the current College organization.

The College, under the command of the AOC and Commandant, has group status within Royal Air Force Support Command. The various training functions are discharged by :

a. The DAW, which is responsible for the postgraduate training of a wide cross-section of officers drawn mainly from the GD Branch.

b. The DIOT, which conducts initial officer training and exercises functional control of the 16 University Air Squadrons.

c. The DSGT, which provides mainly for the professional training of officers of the Engineer, Supply and Administrative (Secretarial) Branches.

d. Flying Wing, Royal Air Force Cranwell, which is responsible for basic and intermediate pilot training for some 50 per cent of new pilots entering the Service. Royal Air Force Cranwell also provides administrative support for the whole College.

In 1966, the Officer Cadet Training Unit (OCTU) moved from Feltwell to Henlow taking over the accommodation vacated by the Technical College. The Aircrew Officer Training School at South Cerney merged with the OCTU in 1969 and since then Cranwell and Henlow have provided the only 2 points of entry into commissioned service. With the graduation of No 101 Entry from Cranwell in 1973, both establishments were conducting essentially similar initial officer training programmes. Although Cranwell trainees were all university graduates, some university graduates completed their initial officer training at Henlow. The stage was set for the eventual merger of the OCTU and the DIOT.

The decision to introduce SGIOT at the College was based upon studies which confirmed that the syllabus for initial officer training at Cranwell was basically the same as that of the OCTU at Henlow. Furthermore, there was no noticeable difference in the standard of performance in early appointments between the Cranwell and Henlow products. The merging of the 2 courses at Cranwell will make available to all the unique environment of the College, encouraging the creation of an improved esprit de corps.

Some progress towards the implementation of SGIOT is already evident. The AOC and Commandant assumed responsibility for OCTU training in July 1978 when Royal Air Force Henlow joined the College Group. Ten students who are not university graduates began their training on No 34 Course in the DIOT in December 1978. Plans have been developed for a gradual build-up of activity in the DIOT culminating in the full implementation of SGIOT during 1980. The College is therefore poised on the brink of the most momentous training development of recent years.

At present the DIOT accepts only 2 courses of 60 students at any one time. Sometimes only one course is in residence. By the summer of 1980, it will be possible to accommodate almost 500 students under training continuously, yielding an annual output of approximately 1200 new officers. Clearly the DIOT will need access to a great deal more domestic and training accommodation. The impact of these demands will make itself felt throughout the College. An extensive programme of works services has been scheduled and is already well under way.

The DSGT has been reorganized to release a large volume of training accommodation in the Trenchard Hall. After the necessary

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1978 - SGIOT (1b)

modifications have been completed, the DAW will transfer from the Whittle Hall to this new location. The DIOT will expand into the space vacated by the DAW and will then occupy the whole of the Whittle Hall.

To provide the additional domestic accommodation required by the DIOT, a barrack block in the East Camp is to be made available and the old Junior Cadets' Mess is to be reopened. In the recent past, students undergoing initial officer training in the DIOT have lived in the College Hall Mess together with officers undergoing initial specialist training in Flying Wing or the DSGT. In the future DIOT students will spend their first 6 weeks in the East Camp area, their second 6 weeks in the Junior Lines and their final 6 weeks in the College Hall Mess, which they will fill to capacity. Having completed initial officer training, students remaining at Cranwell to train in Flying Wing or in the DSGT will transfer to the Trenchard Hall Officers' Mess. York House Officers' Mess will be used to accommodate officers attending post-graduate courses and study periods.

There can be little doubt that the impending population explosion will impose a considerable strain upon all the resources of the College. There will of course be some relief if recruitment figures fall below the targets set but this would be most unwelcome in view of the implications for the future of our Service. We must hope that the required numbers will materialize and attempt to find effective solutions for the many attendant problems. The next few years promise to be particularly significant in the continued evolution of the College.

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1985-1986 - Officer Training (2)

MOULDING OFFICERS FOR THE TWENTY-FIRST CENTURY

This article was prepared by Major G Connor USAF, the USAF Instructor on the Defence Studies Team, DIOT

The officers who will guide the RAF into the twenty-first century will emerge from the current generation of cadets completing Initial Officer Training. The transition into the next centenary is a psychological watershed; an emotional event that calls to mind a future dominated by technology where mankind becomes one with 'machine-kind' to meet and surmount the challenge of all social and scientific obstacles. The challenge of manipulating available resources to meet the Royal Air Force's missions in this environment is formidable.

The mission of the Department of Initial Officer Training is to prepare future RAF officers to successfully meet the challenges of an uncertain future. The Department must provide each cadet with a solid core of knowledge and confidence in turn, creating a firm foundation for future professional growth. This reliance upon a highly-trained and highly-motivated cadre of professionals is a theme woven throughout the fabric of RAF history, recalling memories of Churchill's few, the Dambusters of 617 Sqn and others too numerous to list. Hence, Initial Officer Training must create a sense of professionalism to serve the officer regardless of the century. The skills provided are timeless in scope because the challenges that any officer must face will always be the challenges of the mission and the men.

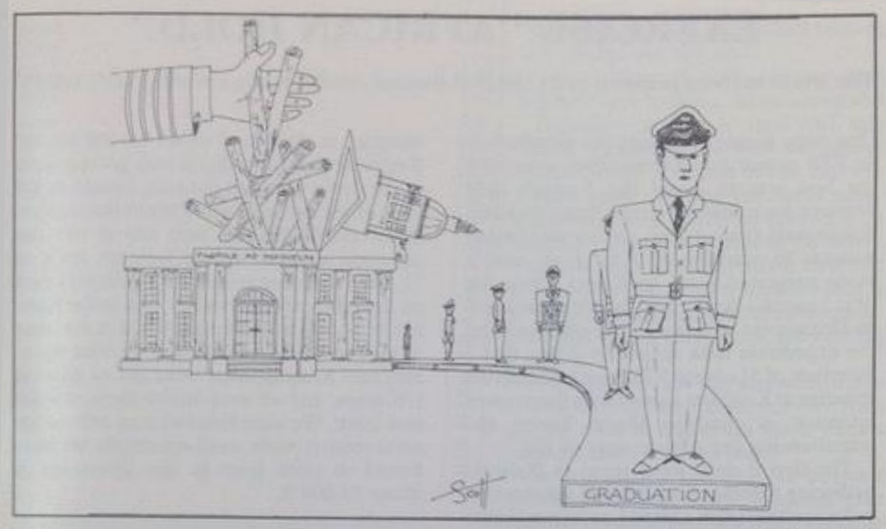
The RAF officer must clearly understand the mission that is his personal and professional responsibility. Be it counting blankets or bombs, flying a desk or a Tornado, the mission must be paramount in his mind. The officer must clearly understand how his efforts contribute to the 'big-picture' of defence contributions to National Security. Only after he is convinced of the criticality of his contribution can he assume the mantle of the officer as a leader of people. Successful accomplishment of the mission depends upon his ability to lead and manage people.

Before offering any insight on the leader as manager debate, a general observation on people is required. An officer's organization is not comprised of desks, aircraft, blankets or buildings; the organization is comprised of people of an incredibly complex spectrum of personality, motivation and skill. To maximize their potential, an officer must LEAD, in a clear, decisive and humane manner.

Without decrying the role of manager, Initial Officer Training imparts a clear distinction between leadership and management. As Field Marshal Lord Slim noted, "The leader and the men who follow him represent one of the oldest, most natural and most effective of all human relationships. The manager and those he manages are a late product with neither so romantic, nor so inspiring a history. Leadership is the spirit, compounded of personality and vision – its practice is an art. Management is of the mind, more a matter of accurate calculation, statistics, methods, timetables, and routines – its practise is a science. Managers are necessary; leaders are essential." Cadets

attending IOT demonstrated the potential to lead during rigorous pre-course screening. At IOT they learn to be a 'military' leader dedicated to his mission and his men. In familiarizing themselves with this new 'art' they will learn to recite a never ending litany of leadership principles, traits and situations ad infinitum. This academic grounding is important only because it acquaints the cadet with the leadership lexicon and skills they will practise throughout the course and their careers. In this sense, IOT serves as an 18-week leadership laboratory where the only unpardonable sin is the failure to learn from your mistakes.

In the IOT environment cadets will observe leaders and followers in action, analyzing successful methods and discarding ineffective ones. They learn the importance of possessing a wide variety of leaderships tools and selecting the appropriate method for the situation, thereby improving the opportunity to successfully accomplish the mission, and it is here that we note a paradox; the training device used with greatest effect to prepare RAF leaders for the twenty-first century is not a microchip-dense 'hi-tech' black box but a cellulose-dense, first-century, 3 metre, 40 lb pine pole.



In the highly intensified training environment of IOT, a pine pole serves as a highly effective learning enhancement device. Use of the pine pole encourages a novice leader to clearly identify his mission and the most efficient path to its successful accomplishment. The fruits of ineffective leadership are enhanced fatigue and discomfort and unrealized goals. In this 'forgiving' training environment, however, these are small prices to be paid if practical and enduring leadership lessons are learned. Such abstract leadership qualities as integrity, discipline and sacrifice find tangible expression in a burden shared and a task completed and valuable leadership moulding occurs.

The leadership skills developed in this fashion carry other dividends because the difference between a Thetford pine pole of the present and an RAF TACEVAL of the future is a difference of degree alone. The skills required to develop an academic study programme for one's cadet flight at IOT are similar to those used by a Flight Commander on an operational unit who wants his aircrews to score well on systems knowledge tests. People who rationalize IOT as something other than the 'real' Royal Air Force are deluding themselves and overlooking the clear importance and demonstrated success of leadership training in preparing the fledgling officer to meet the challenges of the twenty-first century.

Futurists such as Alun Toppler, Gerald O'Neill and Buckminster Fuller have given us glimpses of a future characterized by unbridled potential. Johnson's comment that 'Any problem posed by the mind of men can be solved by the mind of man', holds the hope that such historical problems as famine, pestilence, and disease may finally be within our capability for resolution. The military contributor to this future is to maintain the stability of National Security to allow the tools to address these problems to be developed and matured to required levels. More succinctly, war must be deterred and peace maintained to allow societies to devote critical resources to programmes of long-term potential, hence evolving the capability to meet ever increasing challenges to peace and security. The RAF officers of the twenty-first century must be prepared to contribute to the foundation of security and deterrence. The Department of Initial Officer Training is developing RAF leaders for the twenty-first century by toughening bodies as well as intellects, by familiarizing future Trenchards and Parks with the pine pole as well as the microchip.

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1985-1986 - DIOT Developments (3a)

DEPARTMENT OF INITIAL OFFICER TRAINING – A, B, C, D AND NOW R (RECOURSEE) SQUADRON

This article has been prepared by Sqn Ldr P S Herbertson, until recently a member of the R Sqn DS

FORMATION OF R SQN

Officer training changed drastically in 1970 when the Graduate Entry scheme was introduced and the last Flight Cadet Entry, 101, commenced training. In 1980 a single-gate system was introduced when the Officer Cadet Training Unit at RAF Henlow joined with the Department of Initial Officer Training at Cranwell to form a common course for all combatant members of the Air Force. Running in parallel with this course was the Specialist Entrant and Re-Entrant Course for the medical, dental, PMRAFNS chaplains and legal branches and re-entrant officers and specialist entrants, such as Royal Observer Corps and Auxiliary Squadron Officers.

Since the introduction of the single-gate system, several innovations have been made in course design under the tutelage of the Department's master, HQ RAFSC, Brampton. The manning crisis took its toll with the loss of one Wing Commander and 4 Squadron Leaders from the establishment, coupled with, in recent years, a permanent deficit of junior officer Flight Commanders. In 1983 and 84, Group Captain (now Air Commodore) R M Robson and Wing Commander A B Stephens, took several strides forward in an attempt to improve the Course content to make it more acceptable and therefore easier to assimilate for today's youth. A further objective was to improve the pass rate. At the same time, thought was put to the cadet who at the end of 18 weeks training had failed to come up to the required standard. The existing system was to recourse these cadets for either 6, 12 or 18 weeks (depending on their degree of failure) back into one of the other squadrons and to integrate them into existing flights. These recoursed cadets would then go through exactly the same course as before with no remedial training specifically designed to combat their weaknesses. The requirement for a remedial training cell of some description was recognized and in February 1984 2 Flight Commanders (both now Squadron Leaders), Flight Lieutenants N MacLeod and F N Hutchinson, were tasked with the course design for a remedial flight system to run alongside a main course. Four pairs of remedial flights ran through under the control of Squadron Leader Cadets, initially Squadron Leader (now Wing Commander) G R Herring, then Squadron Leader R M Bonney-James (now Personal Staff Officer to the Air Officer Commanding and Commandant). The seeds had been sown for a successful, specially-designed course and the germination was made complete with the formation of a new squadron initially entitled The Recoursee Squadron, later trimmed to R Squadron. The Squadron was first commanded by Lieutenant Commander D J Fifield, Royal Navy, as a parallel role to his existing appointment as the Defence Studies Team Royal Navy Instructor. By January 1985 the Squadron was fully formed with a total of 9 instructors: Officer Commanding R Squadron, his Deputy Squadron Commander, 6 Flight Commanders and a RAF Regiment Flight Sergeant, capable of providing remedial training for up to 60 cadets split into 2 courses of 30 staggered by 6 weeks, on a 12 week course.

REASONS FOR RECOURSE

While every cadet is an individual and the failings of one may be totally different to those of another, trends have been observed and a course was therefore designed to cater for the weaknesses commonly found in recoursed cadets. The biggest single reason for failure was under-confidence; in this category the cadet was not necessarily the young 18 year old but may well have been a graduate or the 40 year old ex-Sergeant who, in Initial Officer Training, found himself in a difficult, almost alien environment and suffered accordingly. In addition, the fact that the cadet had been recoursed inevitably came as a blow to his self-confidence. This under-confidence had manifested itself with the cadet producing poor performances during the Leadership Camps on his original course; specifically, he was not able to cope in a changing scenario which required flexibility and decisive action when under stress. Frequently, recoursed cadets found it difficult to relate to others when in the lead; they may have been poor subordinates or unable to make the necessary transition to a military lifestyle. In a Service that requires traditional standards, some cadets were recoursed for poor officer qualities with all that that entails; in addition, some failed to make the necessary transition socially.

THE REMEDIAL TRAINING PACKAGE

No 2 remedial courses have been the same, for the cadets have always been different from "the last lot", and the training programme has been continually fine-tuned to produce a better package for the next course. In addition, course content has been changed to reflect the needs of the individual cadet in order to combat specific weaknesses. Bearing these points in mind, the course is almost completely different from the main course, but designed to eventually bring the students back in line with their main course compatriots 3 weeks prior to Graduation, so that they finish where they left off some 12 weeks before. All cadets joining R Squadron have completed the basic course up to the end of the tactical camp in Week 15 of the 18-week course; they are often then sent on 2 weeks leave in which to relax and mentally and physically prepare themselves for the rigours ahead. After an introductory week, the cadets travel to the Royal Air Force Outdoor Activities Centre (OAC) at Grantown-on-Spey in the middle of the Scottish Highlands. At the OAC they complete 2 weeks of Practical Experience Training designed to place them in interesting and, at times, challenging situations where their leadership skills can be developed and inevitably self-confidence boosted. For many of them, to complete all the activities is a considerable achievement. Activities at Grantown include a 3-day expedition usually on the West Coast, skiing, rock climbing, canoeing and mountaineering.On return to the College, they are fully debriefed on their performance to date, as indeed they are at frequent intervals throughout the Course. They then enter a phase of self-analysis and social skills in which they critically and honestly analyse one another's performance and personality; by this means the individual is encouraged to accept why he was recoursed and what he needs to do in order to improve. Following this extensive look at themselves, they then discuss 2 war-time morale situations, one based on a RAF station, the other in Vietnam. In Week 5 of their course they spend 3 days in the field in a military training area. No leaders are appointed and it is up to the cadets to work out an efficient system for survival; this aspect of the camp places the cadets under particular stress. At the end of this physically and mentally very demanding camp they have a mass debrief where almost brutal honesty about one another is the order of the day. By this stage of the Course, the cadets are fully, sometimes painfully, aware of their performance and personality weaknesses, especially those which affect the way they get on with other people. They then return to Whittle Hall for Leadership Training, Written and Oral Communications and Defence Studies. An extensive public-speaking package, all video recorded and played back to the cadet, forms part of a lead-in to a course presentation based on a defence related topic, such as Churchill or the Arab-Israeli War, which is given at the end of the Course. Exercise Quarterback is the name given to the Service Writing revision phase of the Course, the American football quarterback being the linchpin and controller. However, at this stage the main emphasis of the Course switches to leadership; the cadets undertake a number of classroom leadership exercises which allow them to think more deeply about the functions of leadership and to develop their own skills accordingly. In Week 8 a command

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1985-1986 - DIOT Developments (3b)

post exercise is mounted in which the cadets fill executive posts in a Harrier Field Force. This aspect of the Course is well received by the cadets for, in teams of 4, it places them in a position of realistic, albeit paperwork, responsibility in control of a site of 600 men. Up until this stage the cadets have not run parallel to their main course compatriots but they have followed a specially designed remedial package. In Week 9 they then start to move in line with the main course with the tactical camp. This camp is run in a military training area and the cadets work as ground defence commanders and personnel in a Harrier site-based scenario. Hopefully, all cadets will have at least one command post and one field lead as an active defence incident commander. With large courses the command post element is not always possible. On return from the tactical camp, the cadets spend their last 3 weeks alongside the main course taking those lessons that they missed due to their previous recourse.

ACCOMMODATION AND SQUADRON COLOUR

For the first 6 weeks of the Course, when in residence, the junior recourse is accommodated in Daedalus House. The building provides a palatial start to their course but forms the all important close knit community that helps engender an early Squadron spirit. Oh for the South Brick Lines! For the second half of the Course, the senior entry is accommodated in College Hall. R Squadron cadets wear purple gorget patches.

CONCLUSION

R Squadron has been in existence for just over a year. In that short time it has provided a well-rounded, constructive remedial training system. For the first time, recoursed cadets receive a flexible teaching package designed to cater for their specific areas of weakness. Under the direction of the Department's only 2 ex-fast jet pilots, Group Captain J M Curry and Wing Commander T R Cohu, the Director and Wing Commander Cadets respectively, the Squadron's Directing Staff are some of the most experienced instructors in the Department and provide a hard but fair approach. Cadets who graduate from the Squadron have certainly not undergone an easy course but leave the College well rounded junior officers with a greater awareness of their own abilities and increased self-confidence. While 30 weeks of training in no way matches 2½ or even 3 years, as under the Flight Cadet system, these newly commissioned officers have stepped up the first rung of the ladder. They then continue their officer development during their various professional training courses.

R Squadron Directing Staff

FS D R Allen Flt Lt D R Asher Flt Lt P J Drissell Flt Lt I A Lumsden
Flt Lt (now Sqn Ldr) P S Herbertson Lt Cdr D J Fifield (OC R Sqn) Flt Lt P Rooney

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March 1997 - Initial Officer Training (4)

INITIAL OFFICER TRAINING - PRIDE IN OUR FUTURE

By Wing Commander C K Adams OC Cdt Wg

In August 1992 the format and ethos of Initial Officer Training (IOT) was revised and a new syllabus launched which extended the course from 18 to 24 weeks. More recently, several fresh initiatives have recognized the need to train young officers with a genuine pride in their Service. This brief article describes the IOT course and reviews the training ethos which equips our future officers to move to their next phase of training with team spirit and a strong sense of pride as their watchwords.

The cadets' training begins with a 4-week phase called the Basic Induction Module (BIM). The phase is conducted largely by a cadre of high calibre RAF Regiment SNCOs and includes such time-honoured activities as Drill, Ground Defence Training and Physical Training. Here cadets are expected to conform to the firm but fair discipline of the "When I say jump, jump" variety. We also include some training in basic English; perhaps this was unnecessary in the past but many cadets of the 1990s need a hefty dose of English tuition to ensure that their spelling and grammar are up to standard. Needless to say, the principal elements of the BIM are tightly bound together with a large number of inspections of kit, rooms and turn out. The standard is absolute irrespective of age, sex or academic qualifications; indeed, learning basic military skills as a mixed group establishes an early rapport between people of differing backgrounds and previous experience. Although it is unusual, those who do not come up to the mark may be offered one opportunity to repeat the phase. Successful completion of the BIM marks the end of the beginning and cadets proceed to their Squadrons to meet, for the first time, their Flight Commanders and to begin 'officer' training.

The second phase of the course includes General Service Knowledge, Operational Studies, Communication Skills and, as ever, Drill and Physical Training, the major element of the module is devoted to Leadership Training. We believe, unreservedly, that leadership can be taught and we have a graduated and sophisticated programme which takes the cadets from classroom instruction and desk-top exercises through to an 8-day Field Leadership Camp (FLC) at a military training area. FLC is both physically and mentally demanding and successful completion requires considerable effort and commitment. In the past, the syllabus was overlaid with a very strict disciplinary code where cadets jumped to their feet at the drop of a hat and spent most of their working day at attention in a "Yes sir, no sir, permission to carry on sir" mode. We now place much more emphasis on an appropriate 'officer manner' and require the cadets to relate to each other as if they were fellow junior officers and to their flight commander as if he were a Sqn Ldr. Cadets are treated as junior (very junior!) officers from Week 5 and trained in a way that will allow them to make their mistakes without fear in an environment where the staff are able to correct them without their being embarrassed or having their confidence undermined. We use first names when appropriate, but this does not detract from the discipline which ideally must come from within the person and must be in tune with his or her status as a potential officer. Initial signs are that we are training young people who are self-disciplined and are quickly at ease, both with each other and with colleagues in the Service at large.

After FLC we conduct another appraisal of all the cadets; some may need more training, or may even be deemed unsuitable but the majority will go forward to the third and final phase - the application phase. This final stage comprises academic studies, Operational Studies Presentations and management training; additionally, it provides an opportunity to fly. The emphasis is on developing character, confidence, military awareness, pride, and the application of leadership skills. The phase includes a realistic management simulator where the cadets have to organize and undertake the staff work associated with a major Royal Visit to the College. The Operational Studies syllabus has been completely overhauled and now enables cadets to argue convincingly in support of the effectiveness of air power, culminating in a formal presentation using computer-generated and video display equipment. Pride in our Service is further enhanced by a visit by the RAF Presentation Team as well as several presentations given by front line units. In future the Chief of Air Staff himself will give his vision of the future during the cadets' familiarization visit to the RAF Club in Piccadilly. On the more energetic side, the cadets spend a week at the Outdoor Activities Centre at Grantown-on-Spey where their confidence and resourcefulness are enhanced by climbing, hillwalking and canoeing. They also visit an operational station, but not for the standard whistle-stop tour of key points of interest. Rather, they spend time 'sitting on the shoulder' of a working junior officer to see his day-to-day job and, more importantly, to see how he relates to his staff, peers and colleagues. Every opportunity is taken to fly in military aircraft and, increasingly, overseas bases are visited to emphasize the RAF's continuing responsibilities abroad. The culmination of the phase is a sophisticated 5-day 24-hour Combined Operations Centre exercise called Peace Keeper. The cadets fill all the posts routinely associated with the setting up and running of a Forward Operating Base in a realistic scenario. The exercise requires cadets to think for themselves and to take responsibility under conditions of stress, urgency and fatigue. It is an excellent training vehicle, being both realistic and demanding. Peace Keeper is the last major element of instruction and, after its completion, decisions on graduation are made. Those who have not recently attended a ceremonial occasion at Cranwell may be interested to know that when the College moves into top gear it is both stylish and impressive; for the successful cadet, marching off the Parade Ground and up the steps of College Hall is a memorable highlight of a proud day.

It is not only the cadets who are proud. We on the DIOT staff take great pride in the quality of our output. Our new officers have more confidence, are prepared to take decisions and, being anything but 'yes men', they are able to disagree in a polite, informed manner. And that is perhaps the nub of what we have tried to inculcate: the ability to relate to their fellows in an appropriate way whilst having enough confidence, style and authority to hold their own as junior officers in the Royal Air Force.

The signs are that today's graduates from IOT are definitely more at home with their officer status than were many of their predecessors. We have been very fortunate to have had a very high quality input of young people into officer training recently. They are highly motivated and intelligent, with vision and determination; they will be an important asset to drive our Service towards a bright future.

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March 2010 - Initial Officer Training (5a)

Initial Officer Training: Getting Better or Just Different?

Wing Commander Comfort, Wing Commander Cadets

In the last edition of the Journal, the then Wing Commander Training, Wing Commander Davies, concluded her article entitled, 'Initial Officer Training: It's not like it used to be (Thank Goodness!)' with the following observations:

'There is no doubt that Cranwell is producing a new brand of junior officer through a training regime which is designed to develop a more empowered and emotionally intelligent individual. Many of them may be more free thinking and questioning than their predecessors. By developing in them an understanding of the concept of empowered leadership, based on the principle of mission command, there is now a counter balance to the action centred leadership that was previously the sole focus. The aspiration is for the new junior officer to begin to develop a personal style of leadership which in time will come transformational in nature.'[1]

As Wing Commander Davies was reflecting on her tour at the Royal Air Force College, I find myself beginning my tenure as Wing Commander Cadets; however, her article really struck a chord with me as her recollection of her training in 1979 mirrored my own experiences a decade later in 1987. Therefore, I thought that I would build on her premise that Initial Officer Training has moved on significantly in the last half of this decade by demonstrating that it is certainly different and by trying to allay the myth that training has simply become easier, the time old cry that it was *'tougher in my day'* that appears to be quoted by every graduate of every Course on consideration of the current Course and under-graduates. I will then move on to see if the training is getting better by considering how well we are preparing our junior officers for operating in an expeditionary and often Joint environment.

Was it really tougher in my day?

As I look at the cadets under my charge, I certainly do not believe that they are having an easier time than I had some 22 years ago. I will justify my assertion against three criteria: endurance, robustness, and effective intelligence.

If you viewed the Initial Officer Training Course (IOTC) of 1987 as something that merely had to be survived in order to graduate, you only had to keep up a façade for 18 weeks. The training serials were very straightforward in as much as the requirements of any lead were clearly articulated, the lead normally had only one correct answer that required as similar a methodology to resolve it as the previous "umpty-ump" serials, and you generally had only one master to please, the all powerful Flight Commander.[2] Mimic the Flight Commander's style adequately and avoid personality clashes, by being grey if necessary, and it could all be over, successfully, in 18 weeks. Such an approach would be far more difficult today, and not just because the Course is 12 week longer! Officer cadets work with a broad range of directing staff who all contribute to the assessment of a cadet's development; several leadership, management and self-awareness tools are given to the cadets to experiment with, which requires their engagement and application if they are not to embarrass themselves on the various tasks and challenges set before them. And the interactive nature of feedback, action plans and cadet comments on the OACTU Training Management Information System (OTMIS) will often expose those who do not engage with the Course or try to merely 'play-the-game', because they then appear inconsistent or do not enact the words that they have written. The increased length of the Course enables more training and requires dedication and application to succeed also exposing those who would wish to hide behind a façade.

I arrived on IOTC No 104 in June 1987 and my physical preparation had been to check that I could run 1½ miles in less than 11 minutes; I had one practice run, achieved about 10½ minutes and satisfied myself that I would be OK. And I was; my youth (nay immaturity) saw me through, as I could run steadily and my physique facilitated load-carrying. Whilst we no longer attempt marathon distances with pine poles as part of the leadership exercises, nor undertake Leadership Agility Training runs, the physical elements of the Course remain very robust. I have no doubt that my lack of preparation would have led to me struggling against the expectations we set today. The Physical Education Staff stretch the cadets to their limits and provide a fantastic opportunity for the cadets to demonstrate that they are striving for excellence by improving their often-assessed fitness scores – there is nowhere to hide. Shortfalls in physical fitness are now often compounded because the leadership exercises are more cerebrally challenging; capacity is tested and so those that are exhausted by the physical aspects of the exercises perform less well in the leadership tasks. Finally, whilst the long mileage covered at Otterburn in 1987 was a source of pride, as I think that

Making the most of the cool weather.

1. The Journal of the Royal Air Force College, March 2009, 'Initial Officer Training: It's not like it used to be (Thank Goodness!)' by Wing Commander Davies.
2. Ibid.

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March 2010 - Initial Officer Training (5b)

Term Three cadets on Ultimate Challenge.

I coped very well, I also remember having eight to nine hours every evening to recover. Compare that to the six hours respite on Exercise DECISIVE EDGE for personal administration and sleep, and I think that you will see that we still put the physical and mental robustness of the officer cadets to the test.

I cannot remember much of the academics of IOTC No 104, which supports my theory that it was probably a lot of 'learn-and-dump' mentality, well-suited to a recent A-level student who had been reasonably competent. I do remember reciting swathes of the Larousse Encyclopaedia of Modern History in my Bandar Essay, but I never received any feedback and was certainly not going to win any prizes for original thought or analysis. That is certainly not the case now. With the involvement of King's College London for the Air Power Studies element of the Course, cadets find themselves having to produce under-graduate-quality work and analysis in order to progress through the Terms. Failure to understand, assimilate and articulate analysis of the political, military and leadership issues covered by the syllabus are no longer acceptable; today's cadet has to prove their academic and analytical credentials far more than any cadet of the 1980s. Term Three has also introduced a new aspect of effective intelligence: self-control and self-regulation. Cadets in Term Three are given far greater latitude than I remember from my day; this is an opportunity to apply yourself to areas of specific interest or areas that have been identified for further development. However, there is no longer a member of the directing staff constantly looking over your shoulder to make sure you deliver. Cadets have to manage their own time and apply themselves to their studies and personal development. They also have to keep themselves fit and behave in the manner expected of a junior officer; most succeed but occasionally cadets let themselves down and have to complete remedial training before they graduate. This latitude provides another challenge for today's cadet that did not exist before; they can no longer just do as they are told without necessarily taking responsibility for themselves, which certainly was possible in the past.

Are we preparing our junior officers for operating in an expeditionary environment?

Before I get ahead of myself, I clearly recognise that we are responsible for producing 'generic' junior officers who will graduate to Phase 2 specialist training and then receive theatre-specific pre-deployment training before going on operations. However, we endeavour to give our officer cadets a head start by enlightening them as to the historical, contextual and operational background of ongoing conflicts through Air Power Studies and the Basic Air Warfare Course. We try to remove any misapprehensions about the physical aspects and language of a Deployed Operating Base through exercises DECISIVE EDGE I and II. We also educate and prepare them for the sheer breadth of contribution all staff officers have to make on operations, often outside their immediate specialisation, through a very demanding mission command-oriented period at the Force Development Training Centre, Grantown-on-Spey, and by mentoring in the Command Operations Cell on Exercise DECISIVE EDGE II in a range of SO3, SO2 and SO1 appointments.

The aspects of training highlighted in the previous paragraph were not present during my time at Cranwell. Times have changed significantly. However, I would argue that I was not prepared for the reality of my post-graduation world – the Cold War; the language and execution of National and NATO exercises had to be learned 'on-the-job' and, whilst NATO and North West Europe was quite rightly the primary focus of our training, the expeditionary nature of the Falkland Islands campaign had been completely forgotten or ignored. Therefore, the current training at least attempts to acknowledge and prepare the cadets for the operational world that they will graduate and rapidly deploy into.

What about the reality? Having just returned from six months based in Kuwait, where I was commanding disparate elements across Iraq, Kuwait, the United Arab Emirates and Oman, I was consistently impressed by our youngest junior officers. The maturity, professionalism and operational focus of the majority of junior officers that I encountered was worthy of pride; I must stress that this view was formed before I knew that I was going to be posted to OACTU! All of the attributes that we preach on the Course were present: proactive, adaptable, agile and willing to act. Whilst this was true of most of our officers, the impressive factor was that even those that were relatively inexperienced managed to perform and thrive in the deployed environment. A key element was the ability to deal with ambiguity, to operate without having all the facts to hand and not be paralyzed by gaps in knowledge, and to make decisions confidently, based on the information available at the time and the flexibility to adapt the plans as events unfold. We expect a great deal of our junior officers and the fact that they are so rapidly delivering on deployed operations is testament to their character, their training and their application. We should take some credit for the training element. Notwithstanding the lack of threat of physical harm in the training environment, I am confident that our newly commissioned officers are better prepared, both physically and mentally for the deployed environment.

Conclusion

Whilst it is dangerous to rely on anecdotal evidence, my experiences leave me in no doubt that the IOTC has changed significantly since my encounter with it in the 1980s. It is longer in duration,

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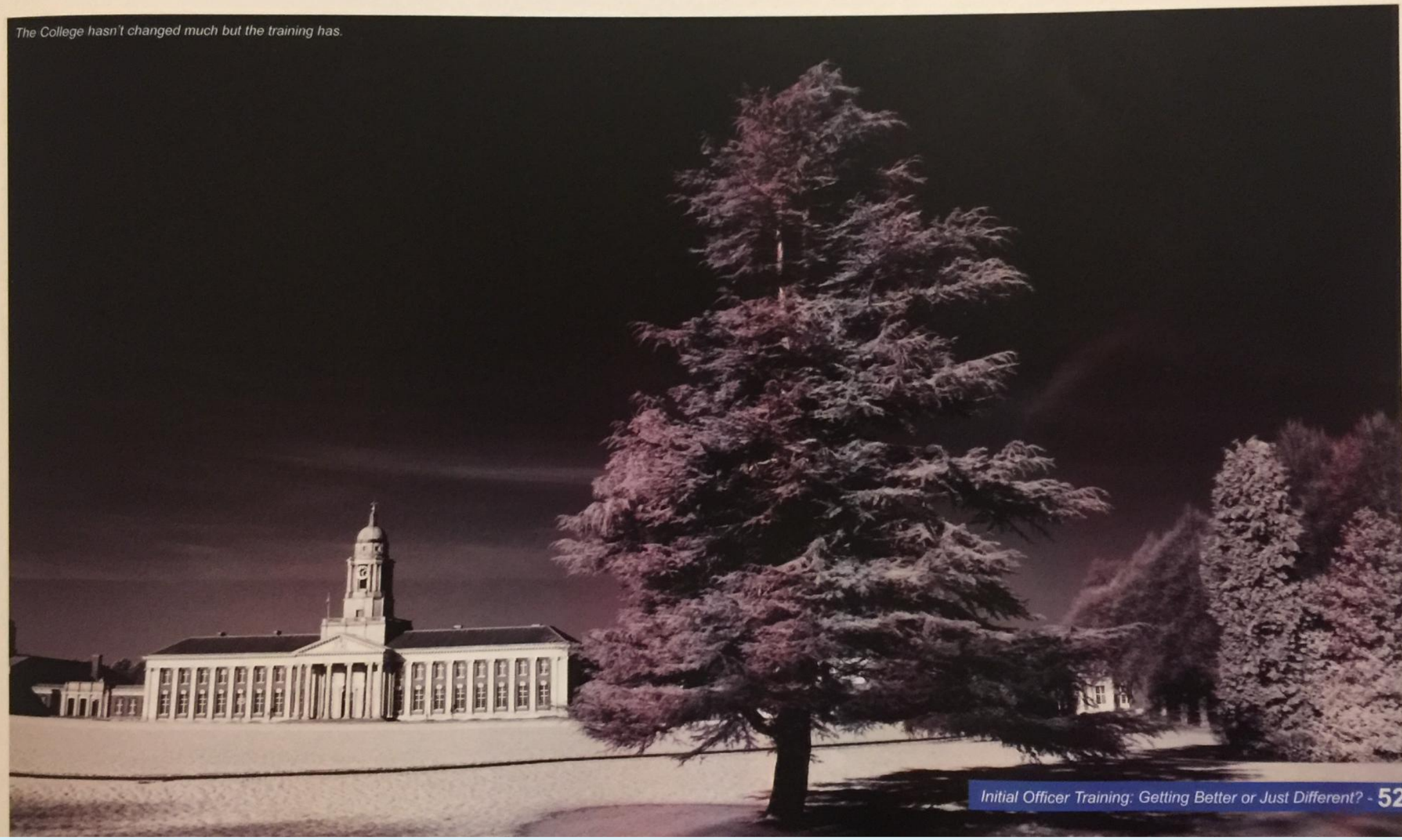
provides the opportunity to learn more leadership, management and self-awareness tools, is more academically testing and robust, and stretches the cadets both physically and mentally in relevant scenarios. Has it changed for the better? The drivers and motivation behind the most recent changes to the Course have been to produce more well-rounded individuals and better prepared individuals for the challenges facing the junior officer of tomorrow. I believe that it has changed for the better and will continue to do so; the development is iterative. I am sure that all of our predecessors at OACTU have strived to improve the Course through their various tenures, and we will continue to try and improve the Course into the future. Thinking about the requirements of tomorrow, whilst being informed by the past and present, rather than constrained by them, will remain a constant challenge. The reality of current operations requires us to focus on making the Course as relevant as possible, without solely preparing for today's mission at the expense of our ability to respond to the unknown missions of tomorrow. Therefore, we must practise what we preach and demonstrate flexibility and agility in adapting the Course to the Service's future, and at the same time the ambiguous requirements of the modern world.



The College hasn't changed much but the training has.

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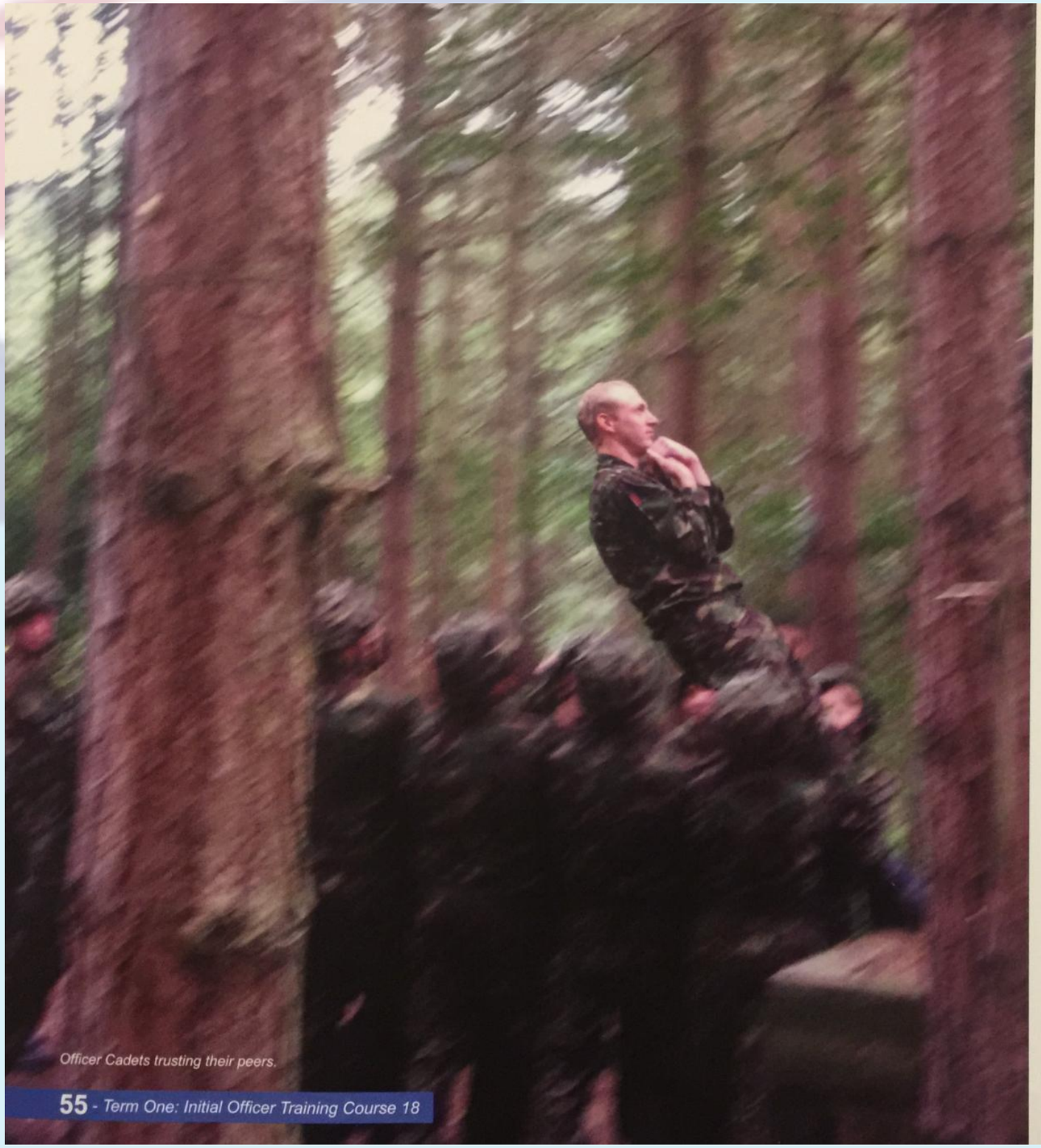
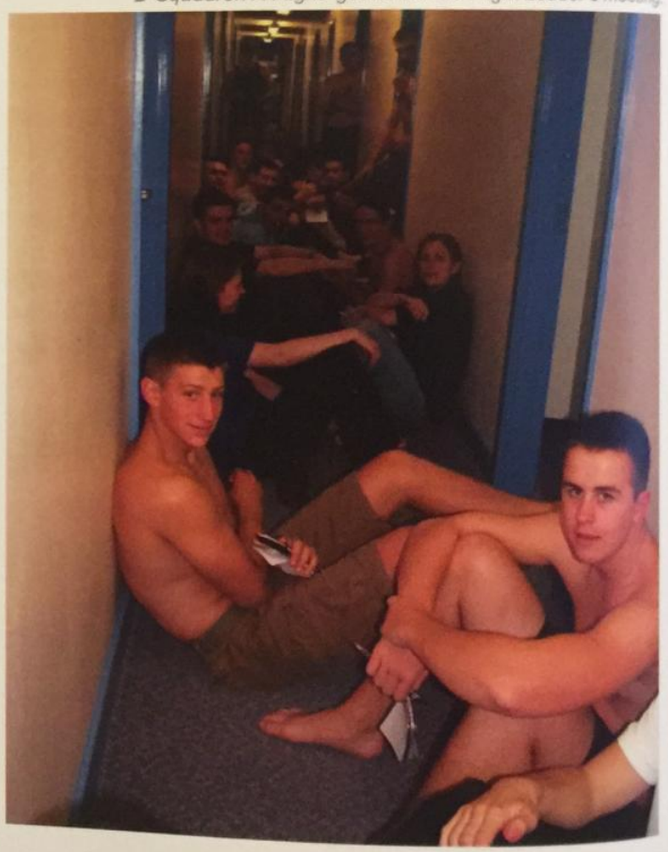
March 2010 - Three Terms of IOT (6a)



Officer Cadets trusting their peers.

D Squadron A Flight experience the Low Ropes.

D Squadron A Flight gather for the Flight Leader's meeting.



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March 2010 - Three Terms of IOT (6b)

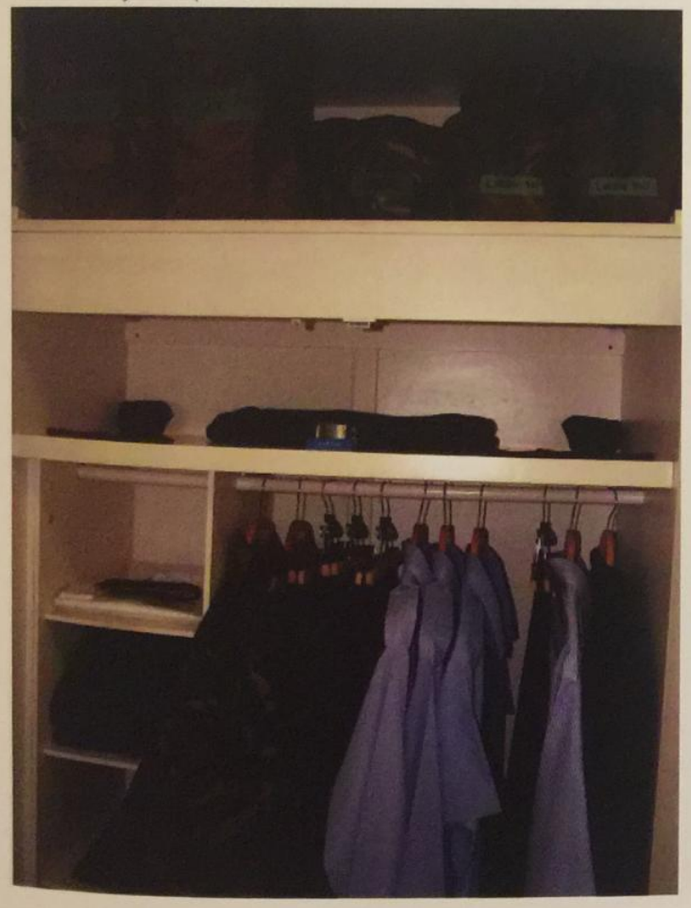
Term One: Initial Officer Training Course 18

Officer Cadet Weaver, D Squadron

Well, what the Flight Staff say is true: the minutes drag by but the weeks rush by. It seems almost unbelievable that we on D Squadron have made it all the way to the end of Term One already!

It's certainly been hard work from day one – getting used to the constant round of ironing, cleaning, inspections and restrictions hasn't been easy, but we've got there. And, we no longer wear our berets as "bonnets", although, occasionally, we still iron our uniform with a flip-flop – at least according to the Flight Sergeants! We are learning 'spot the officer', and we're getting pretty good.

A locker ready for inspection.



The physical training has been a shock to some people's systems but we are all well on our way to being the toned, super-fit individuals that will win back the Inter-Squadron Games trophy next term! In many cases, PT 'drill' has been even more of a shock to the system than the activity itself – I have to admit I never thought I'd be doing drill 'with a jump' in shorts, t-shirt and trainers. Battle PT and aero runs are my personal favourites, second only to the Corporal PTI's 'warm-up to music'.

Air Power Studies has been gradually introduced this term. I think most of us agree that it has taken a while to get into the swing of it (particularly those of us for whom writing an essay is a distant memory!), but the lectures have been interesting, particularly towards the end of term as we started looking at strategy, tactics and the art of war. The "comfy chair challenge" deserves a mention as a method of increasing the difficulty of an Air Power Studies lecture: take one Term One cadet, subject to an hour or so of hard PT, feed a large and satisfying lunch (including apple crumble and custard), place in a warm, darkened room and present with a comfy armchair in the front row. Is it physically possible to stay awake? Some cadets have proved that it can be done.

Regiment lessons have formed a large and vital part of Term One. It is with the Regiment Training Flight that we learn the Force Protection skills that will prove vital during Ex DECISIVE EDGE, but more importantly as we further our Service careers. Subjects range from First Aid to weapons handling; from setting up a vehicle check point to post-indirect fire (i.e. rockets and mortars) attack recovery. All the Regiment staff have made a big impression, and taught us the value of professionalism, comradeship and a sense of humour, in addition to their Force Protection skills.

Leadership has also played a vital role in our training so far. There have been plenty of theory lessons, backed up with practical exercises (from low ropes to the confidence course). There are also plenty of formal leadership exercises, building up from STATIC to DYNAMIC, through the all new ACTIVE EDGE and finally on to the big one: DECISIVE EDGE. They give all cadets a chance to take the lead and develop their skills through practical experience and peer review. Exercise ACTIVE EDGE has been designed to introduce Force Protection skills in a scenario-based environment so that we have a chance to lead as a Patrol Commander, Combined Incident Commander, Guard Commander and an Adjutant before DECISIVE EDGE. It was certainly a steep learning curve for some (myself included), but I think I speak for everyone when I say we are grateful for having the opportunity to practise this type of exercise in a relatively pressure-free environment.

D Squadron A Flight review their activities at FDTC Fairbourne.

In summary, Term One has been excellent. It has been difficult, frustrating and downright annoying at times, but it's been challenging, rewarding and exciting in equal measure. The sense of accomplishment in overcoming the hardships we have endured is great, and the reward of extra freedoms in Term Two will be all the sweeter for having lived without daily "Tesco trips" for 10 weeks. Personally, I feel I have increased in confidence and self-discipline immensely, had some really good times, and hopefully made plenty of friends for life.

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March 2010 - Three Terms of IOT (6c)

Term Two: 'Living the Dream' with IOTC 17

Officer Cadet Gray & Officer Cadet Burrows, C Squadron

We were moved into our new accommodation for the second term without much ado. The Mess was a lot closer to Whittle Hall, which meant that our march to work in the morning was a lot shorter. The progression into Term Two saw that we were allowed a little more room to manoeuvre ourselves through an increasingly challenging IOT, and generally life was slightly more civilised but busier. The intermediate term would see our leadership advance and more focus put on academics and personal responsibility.

Then we were off to Exercise MILAID – an exercise which tested our evolving leadership skills in a scenario where we were assisting civil authorities. We questioned farmers about outbreaks of deadly viruses, apprehended drug dealing terrorists, stormed gangster's hideouts – all whilst improving our leadership and followership skills, and testing our physical courage and fitness. The final field exercise was called 'Top Secret': sections of cadets chased each other around a large area, hounding one another for possession of 'rockets' for which points were awarded. There were many restrictions to which penalties were applied. It was not just an exercise of teamwork and fitness, but of clever planning and cunning. But still, the steadfast C Squadron spirit saw all through to the end with a smile on their face and thoughts of a warm meal on their minds. The last night was spent in relative comfort, with all four Flights accommodated in barracks with a practice Dining-In night to round off the Exercise. This was the first introduction to a Dining-In night. Although the setting was far from an Officers' Mess, it was a great experience that has set us up for the more formal occasions in Term Three.

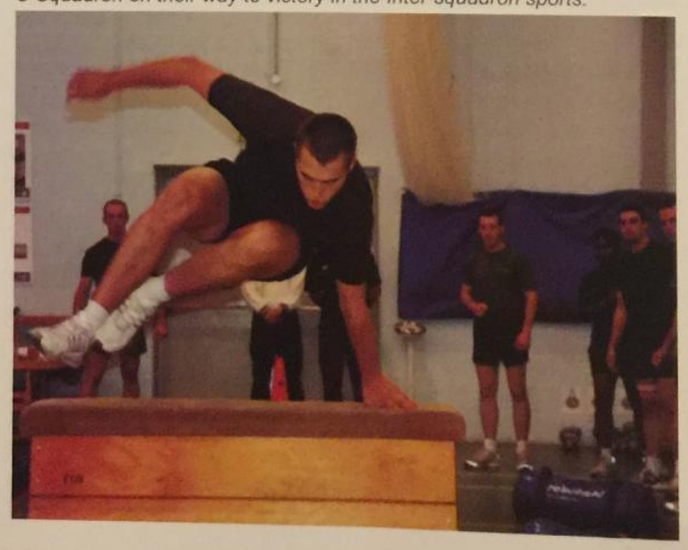
Academics played a far larger part in the second term and for some weeks we were treated to an Air Power Studies (APS) lecture every day. The development in our fitness, both physical and mental, was much improved. We looked at case studies of the Falkland's War – a model for ethics in the battlefield; Kosovo – not; the first Gulf War; Vietnam; and, The Battle of Britain – Our Finest Hour. We were presented a broad overview of war during the lectures and refined our knowledge during seminars, where we discussed, in small groups, the lecture in detail! Through prods and probes from the academic staff we discussed the material in more depth and it was interesting to see people's views and thoughts, often widely ranging, on topics of ethics, justification of going into war, and conduct during conflict. Knowledge of the RAF, the UK Armed Forces, and warfare and defence improved hugely; to such an extent that arguments about the ethics of the combined bomber offensive were overheard in the bar! Our knowledge was judged formally twice – firstly in the APS exam and secondly in the Bandar Essay. The Bandar, a 1,500 word essay, was for some the first taste of an academic essay, but we all applied ourselves diligently and generally the grades were impressive.

The PEd staff saw us sliding on crash mats, diving on tackle bags, and boxing against each other in the sport-specific circuits. Our physical training intensified with hill-training, sprints and the formidable 'Bleep Test Circuit'. The swimming circuits were ramped up with relays whilst wearing overalls and carrying weights. All sessions were now encouraging teamwork and our abilities to set ourselves personal fitness goals and achieve them. Competitions were held between the flights in cross-country and Battle PT and a personal competition in the Biathlon. Our overall fitness scores all improved on the Initial Officer Training Fitness Assessment, so the hard work paid off!

C Squadron became the organisers and hosts for the Inter-Squadron Games. The pressure was on to compete and win. D Squadron was double the size of us, but our higher fitness levels, sheer determination and grit won us the title. The Games

Supporting the civil community on Exercise MILAID.

C Squadron on their way to victory in the Inter-squadron sports.



C Squadron triumph at the Inter-squadron sports.

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March 2010 - Three Terms of IOT (6d)

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March 2010 - Three Terms of IOT (6e)

were concluded by the legendary 'Superstars'. A circuit of intense exercises completed as a team. The winners took the flag and took the trophies. The Sports Committee then presented us with a second afternoon of Inter-Squadron Sports against the Senior Squadron. Naturally we quashed them at most events; overall C Squadron had an excellent win!

The Charities Committee organised many fundraisers for us to take part in throughout the term. This included the Macmillan 10K Run! Everyone ran competitively and most dressed up for the occasion.

The Mid-course Function/Partner's Day denoted the 'half way point' in the Course. Not only was it a night to celebrate, but a chance to hone our officer etiquette and show our partners and loved ones what we really do from day to day. The evening began with a formal Training Reception and ended in an informal party with 'swing band' and a 'top notch' cheese board in CHOM! All enjoyed the evening.

The most demanding part of Term Two has been Exercise DECISIVE EDGE. All of our hard work so far resulted in the amalgamation of Force Protection and Leadership Skills. Before we could deploy, however, we had to undergo Pre-deployment Training at RAF Barkston Heath. This involved learning how to build sangars, and then learning how to defend them. Fortunately for us, the Regiment Training Flight are going soft and we were able to prepare for our 18 hour work shifts by getting a couple of good nights sleep!

We were finally deployed to Moltovia by Merlin helicopter. After landing, we were rushed straight to our sectors to begin putting up defences. The leads began and we were all positive of passing Ex DECISIVE EDGE first time. IED's became the bane of our lives. The incidents were coming in thick and fast as the Exercise progressed. The lack of sleep and long working hours began to take its toll and slowly, cadets began to fail some leads. The sangars were cold, the guard shifts were tedious, and the Combat Incident Team was always busy. Morale stayed high nonetheless in the effort to get everyone through their leads successfully. The Exercise ended with some much needed enforced sleep time and a big breakfast provided by the field catering team before receiving our APS and Bandar results (and handing over the DOB to the Dutch Forces). Morale was even higher as we departed from Moltovia.

Just four days after our return to Cranwell, we were ready for End of Term review and ready to see if we had progressed to the next stage – Term Three. No Rest and Recuperation for the wicked…

Throughout Term Two we have all gained a great deal of military experience, developed through Exercises MILAID and DECISIVE EDGE. On a personal level, it has been a journey of self-realisation. Everyone has developed new skills and discovered strengths, grasped opportunities, and gained knowledge and experience. Term Two has been full of assessments and exams. Despite all of this we can all honestly say that, yes, Flight Sergeant Carter, we are 'living the dream'.

Exercise DECISIVE EDGE in progress.

Yes – this is the mighty C!

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March 2010 - Three Terms of IOT (6f)

Term Three: B Squadron Almost Graduated

Officer Cadet Kennedy, B Squadron

After the first and second terms of Initial Officer Training (IOT) where cadets are educated and tested in topics such as military skills, academics and leadership training comes Term Three. This term gives officer cadets the opportunity to experience life as an officer in a relatively risk-free environment. As the Senior Squadron, Term Three cadets have the privilege of living in College Hall Officers' Mess (CHOM).

The Carousel is a month-long part of Term Three where the Squadron is broken down into four Expeditionary Air Wings (EAW's) and rotate through different activities. These activities include the Basic Air Warfare Course (BAWC) and visits to various RAF stations. Also included is a visit to Amport House (the Tri-service Armed Forces Chaplaincy Centre) and an expedition undertaken at the Force Development Training Centre (FDTC), Grantown-on-Spey.

The BAWC is a two-week course at the Air Warfare Centre Cranwell which covers topics such as Integrated Air Operations, Rapid Global Mobility, Network Enabled Capability and Information Operations, to name just a few. The Course culminates in a final exercise (Ex HAVESOME) where cadets plan an air operation on the imaginary island of Bawkisle.

Cadets visit stations all across the UK, from Lossiemouth to Marham, and from Coningsby to Valley, learning about different aspects of how a station runs. Different departments are visited to get a greater understanding of what it takes to run a station whilst executing operations and exercises across the world.

Harrier Taxi.

Amport House is the Tri-Service centre of Chaplaincy; a beautiful Grade 3 listed building with Grade 2 listed gardens. During this time cadets gain invaluable experience in interviewing people who have sensitive issues, which will invariably be a challenge for officers of tomorrow who manage any number of people. Cadets also learn about "Kinforming" and the duties of a Visiting Officer which are undertaken when a Serviceperson is killed.

FDTC Grantown-on-Spey is a week of the Carousel where cadets learn, and have a chance to experiment with, mission command by setting off on an expedition through the beautiful Scottish countryside. The purpose of the mission is to gain as much height and distance as possible over three days using human-powered transport only. The methods available are walking, cycling and canoeing.

In the weeks after the Carousel preparation for the final exercise of IOT begins.

Other places that are visited are the RAF Club, RAF Museum and St Clement Danes (the RAF Church) as well as the Newark Air Museum and No 29(R) Squadron at RAF Coningsby. All of these visits are intended to give officer cadets a broader understanding of RAF history and culture.

From day one of Term Three officer cadets commence preparation for Exercise DECISIVE EDGE II; this is why the Squadron is broken down into EAW's. Each cadet is given a specific functional role from A1 Admin to A6 Comms. The planning takes place to execute air operations in the imaginary 'Zone of Separation' between the two states of Moltovia and Lovitznia. The Exercise is designed to demonstrate the cooperation required between "A functions" in the Combined Operations Centre (COC) environment. Once all of the planning has finished, the Squadron deploys the COC to Deployed Operations Base Syerston and in turn in their EAW's, execute the Operation.

In the cockpit of a No 29(R) Squadron Typhoon.

Merlin take-off at Ex DECISIVE EDGE.

The final two weeks of Initial Officer Training consists of the final Progress Review Board, and meticulous preparation for the Graduation Parade under the ever watchful eye of the College Warrant Officer.

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May 2012 - OACTU (7)

Where Have All The Cadets Gone?

Squadron Leader A R Sadler MBA BSc MIET MCMI RAF, Officer Commanding Leadership Training Squadron, OACTU

Generally the annual Officer and Aircrew Cadet Training Unit (OACTU) intake is about 1% of the RAF's strength. At present this equates to 480 officer cadets per year, or 4 intakes of 120. This reflects the number that Initial Officer Training (IOT) was designed to take back in 2005. However, 2009/10 saw a surge in recruitment so that intakes were approaching 150 cadets. Eventually OACTU should get 4 intakes a year of somewhere between 70 and 90 to reflect the new size of the RAF, but in the meantime course sizes are reduced severely: the current C Squadron, IOT Course 27 is running with only 21 cadets.

The aim of this article is to provide an understanding of the delivery of leadership exercises, the challenges small course numbers create and how OACTU has been able to overcome these challenges. OACTU's aim has been to maintain the quality of training and opportunities for practice.

IOT has a strong focus on leadership with cadets being taught leadership theory and undertaking practical exercises. Cadets are given around 30 hours of classroom instruction where lessons aim to cover a wide range of leadership theories, based around John Adair's theory of Action Centred Leadership, as well as methods of command and management used in the RAF and in the wider British Armed Forces. Each cadet needs to develop their own effective style of leadership, but for them to achieve this they need practical experience in leading a team of personnel in a military environment. As a result far more time is devoted to practical leadership; cadets will spend about 30 days on practical leadership exercises during the course. Each exercise takes the form of a series of "leads"; a lead being a period of time which a cadet spends in charge of a team. During the course each cadet will undertake 12 leads, when added together these will total 4-5 days and this training is an essential part of the transition from civilian to military officer.

Each Squadron is divided into flights, which are sub-divided into sections of 8 cadets. The early exercises typically have one cadet leading their section with one cadet acting as an observer. The observer has the luxury of stepping back and watching leadership in action without the pressure of being in charge. Each section requires a member of staff to manage the lead and each lead, including a review period at the end, takes 2 hours. Thus for the early exercises OACTU can run 4 leads per section per day, giving each cadet one lead every two days. Unfortunately, it is unlikely that each OACTU course will divisible exactly by 8; each section can have different numbers of cadets. To overcome this, the directing staff reconstitute the sections daily or every other day so that everyone finishes their 2nd lead at roughly the same time. Often, at the end of an exercise, there is time for some cadets to have a third lead as a further training opportunity.

In addition to training the cadets, OACTU also needs to ensure that its instructors are well trained. Although the unit has reduced staff numbers it needs to maintain a core team that is sufficient to train current numbers and to be ready to respond to future demands; generally OACTU needs to train 40 to 50 personnel a year in order to maintain its establishment. In theory fewer cadets should lead to an increase in spare capacity amongst the instructors, but to maintain the highest standards of instruction, high levels of experience must also be maintained. To achieve this all staff need to be involved regularly in instruction. It is easy to see how, with fewer cadets, the number of leads reduces and the number of opportunities for instructors to manage leads and maintain proficiency reduces accordingly.

Air Marshal Andy Pulford RAF, Air Member for Personnel with cadets on Op MUCRONIS.

Cadets taking part in Operation MUCRONIS.

With a full complement of instructors and, in some cases, only 20 to 25 cadets on a course, there is a danger that cadets can feel like lab rats, under constant observation from large numbers of staff. Cadets and instructors must develop a professional rapport and maintain consistency in instruction; this is very difficult to achieve if instructors are changed regularly. To overcome this during Ex Active Edge, a term one exercise, OACTU ran 4 leads concurrently (rather than the usual 3) and bolstered cadet numbers by employing OACTU staff not normally involved (e.g. Physical Training Instructors) along with officers and sergeants waiting to start professional training. This ensured that instructors were able to maintain their skills without putting the cadets under excess pressure and whilst maintaining consistency of instruction.

Term 3 culminates in a final exercise, Operation MUCRONIS, a realistic recreation of running a Combined Operations Centre (COC) at a Deployed Operating Base (DOB). The Exercise is designed for groups of 25 to 30 cadets to take turns working in the COC for a period of 72 hours each, so that over the 9 days of the exercise all term 3 cadets are given a period of time in command. When not in the COC, cadets become workers around the camp. The Air Member for Personnel, Air Marshal Pulford, and Commander in Chief Air Command, Air Chief Marshal Sir Simon Bryant, visited the Exercise in September and November 2011 respectively; each commented on the realism of the scenario and that maintaining this realism is critical in ensuring that cadets are able to deal with the pressures of command and leadership in the RAF.

OACTU staff identified quickly that cadet numbers would make it difficult to maintain realism and provide effective training during Op MUCRONIS in November 2011.

In order to develop their skills, the cadets need work to do with most of the work being created by the cadets themselves (e.g. setting up accommodation, managing vehicle fleets, setting meal times, holding briefing sessions etc). With fewer cadets this workload reduced and the onus was on the instructors to provide sufficient stimuli for the cadets. In order to achieve this, the physical size of the exercise was limited and all 63 cadets involved (term 2 and term 3) were squeezed into a single area at RAF Syerston. It was then down to the instructors to ensure that the exercise was closely managed to maintain a high quality of training without compromising realism.

Eighteen months ago an assessment of OACTU concluded that IOT would not function properly if cadet numbers dropped below 60 per intake. In reality it has worked with numbers well below that without affecting the standard of the graduating officers. This is testament to the hard work, ingenuity and professionalism of OACTU staff of all ranks. In particular it has demanded considerably increased participation by staff during exercises, to replace the friction and pressure generated by larger numbers of cadets. That said, everyone is looking forward to the time when Whittle Hall once again resounds to the footsteps of nearly 300 cadets in training.

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May 2012 - OACTU (8)

If You Do What You've Always Done

Flight Lieutenant K Westoby-Brooks BA (Hons) RAF, Officer Commanding Delta Flight, OACTU

"If you do what you've always done, you will get what you've always gotten." (A.Robbins)

This is the mantra of Delta Flight, which provides bespoke leadership training to at risk or failed OACTU cadets. The opportunity to undertake remedial training is an important aspect of training at OACTU. It is recognised that there are many reasons why a cadet may struggle in training and why some individuals may take longer to reach the standard of becoming a credible junior officer within the RAF. Prior to March 2011 those cadets that were unsuccessful on the formal leadership assessment, namely Exercise Decisive Edge in Term 2, or those who had not reached the standard required for graduation in Term 3, were transferred from their squadron to Delta Flight for a 7 week remedial training programme. The result of this recourse in training inevitably meant that a cadet would not graduate with their friends and colleagues.

An addition to the remedial training package was introduced during March 2011, which attempted to keep as many cadets on the main course as possible. The new elements of the remedial training package allowed additional bespoke training to be introduced in-between term time, to give at risk cadets the best possible chance of performing to a higher standard in the following term. For those cadets who failed the leadership assessment, the remedial training conducted in-between term time introduced an opportunity for them to remain on course by immediately addressing their areas of development before retaking the leadership test in the final term. This became known as the Delta Flight reinforcement and remedial leadership training packages: R1 following term 1, R2 following term 2 and R3 following term 3, the latter remaining the full 7 week recourse programme. The remedial training aims to identify the root causes of a cadet's failing, which may rest within a lack of skills, self-belief or self-awareness.

The challenge to the Delta Flight staff is to find the appropriate training opportunities to give their cadets the best possible chance to address and develop these areas of failing.

The R1 package lasts for 5 days and has been designed for cadets who are behind with the militarisation phase of the first term and who are, most commonly, lacking in confidence in elements of the course. This package reinforces leadership theory, which can be immediately applied on Exercise Delta Dynamo conducted on the North Airfield. The cadets undertake a topical military debate, which aims to improve their analytical and communication skills under pressure. Improvement of self-awareness and emotional intelligence is addressed through the use of the Strength Deployment Inventory (SDI) and on exercise, reinforced through frequent feedback sessions.

The R2 package lasts for 10 days, with the cadets acting as mentors to the R1 cadets for the first 5 days of their programme. The R2 cadets also undertake a personality awareness session using the Myers Briggs Type Indicator (MBTI).

Cadets apply leadership theory on the North Airfield.

The MBTI sessions give the cadets the opportunity to explore and understand the perspectives of others, which improves communication and teamwork – essential skills for becoming an effective leader. This awareness is reinforced during Exercise Delta Prime, which takes place at the Stanford Training Area (STANTA) on the remaining 5 days of the course. Ex Delta Prime focuses on developing practical leadership ability which, combined with improved self-awareness, encourages cadets to become more effective leaders. On completion of the R2 package cadets rejoin their main course for Term 3 and retake the leadership test on the next Exercise Decisive Edge.

The R3 package lasts for 7 weeks and therefore results in a full recourse for the cadets. This course overlaps with the R2 package and continues into the following term for a further 5 weeks of self-awareness training, confidence building, improving self-belief and 2 more trips to Thetford for practical leadership exercises. Upon successful completion of this package cadets rejoin the senior squadron for their pre-deployment training prior to Exercise Decisive Edge 2. The decision will then be made alongside their colleagues about whether they had shown enough improvement to meet the standard required to commission into the Royal Air Force.

The variety of personalities received on Delta Flight ranges from shy and under confident, to arrogant and over confident. We help the cadets to become more aware of how they are perceived by others and give them the necessary tools to help them modify their behaviour to a more appropriate and effective command and social presence.

How? – As mentioned we use MBTI on R2 and R3, we also re-visit the Strength Deployment Inventory (SDI) and discuss motivational value systems, why people react in certain ways depending on external influences. We talk openly and honestly and use straightforward language to pinpoint problem areas and then elicit from the cadets a way forward that could help them improve their performance on the main course and into the future.

Force Protection (FP) is used as a tool to build confidence and instil a more positive and authoritative command presence. During one particular FP session one cadet once said "All I've learnt so far is how to shout louder, I'm not going to need that as an Admin Officer". During that afternoon, when she was under fire with rounds, smoke and simulated grenades exploding around her she soon realised that raising her voice was the only way she would get her orders heard and actioned. A reminder to the cadet that she was in the military and had signed up as a 'Warfighter first'. A shock to her but one that brought about reconsideration to the attitude she would take forward in her future employment.

Another more gentle method employed is to encourage talents the cadet already has. At one morning inspection a guitar was noticed in one of the cadet's rooms. Through questioning of his colleagues it was found that this shy, under confidant individual was a bit of a singer so, that evening, he, with 2 others, were allowed to collect their instruments for an hour and entertain the other cadets around a Hexi stove campfire in the woods. We then helped the cadet to transfer this confidence to his time in command.

Exercise Delta Prime is one of the most physically challenging exercises undertaken at OACTU. The cadets are given difficult leadership tasks to carry out under specific time pressures. Coupled with the physical challenge of covering a large exercise area the cadets are tested, not only in their decisiveness under pressure, but also on their physical and mental robustness, remaining as the leader over many hours and in some cases days. An important aspect of remedial training is to have real consequences for actions. Therefore, if the rations are not found the cadets will not eat and if the task is not completed the cadets will not rest. These are real and immediate consequences that really bring home to the cadets the implications of their decisions and actions.

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May 2012 - NCO Aircrew IOT (9)

Non-Commissioned Aircrew Initial Training Course Charity Work

Flight Lieutenant A C Gill BA RAF, Officer Commanding NCAITC, OACTU

Non-Commissioned Aircrew Initial Training Course (NCAITC) 248 has been very busy over recent months. Aside from completing an extremely intense course, NCAITC 248 managed to raise over £8000 for various charities as well as aiding the community with various projects both before and during the course. Over the period of approximately 22 weeks, NCAITC 248 integrated with the community displaying the Royal Air Force's selfless nature whilst encouraging the cadets to develop teamwork; a trait paramount to the future of any potential aircrew or air traffic control cadet.

Cadets of NCAITC 248 clear an area of forest.

Due to a delay to the start of NCAITC 248, the direct entrant cadets were all brought to Royal Air Force Cranwell to begin a pre-course programme set up by the course instructors not only to begin the course bonding process, but to introduce the cadets to the intensity and expectations of the NCAITC they were soon to embark on. Concurrent with this pre-course programme were various community projects, including a weekend helping Lincoln's local Butterfly Conservation. Here the cadets cleared, cut down and burnt large areas of bush and small tree growth to allow sunlight and warmth into the forest. This work encouraged breeding of the rarer species of butterfly in and around the conservation area.

Part of the pre-course programme involved a week at Royal Air Force Akrotiri, Cyprus. Although an enjoyable experience, it wasn't all sun and sand with the cadets getting stuck into helping out the station saddle club. Very well run, but relatively short staffed, the RAF Akrotiri Saddle Club struggle finding time to carry out miscellaneous tasks, so help from the cadets was greatly received. Jobs completed by the course included painting field fencing, weeding, general repair work and an ingenious shelf contraption designed and made to save room and help organise the different horse food and medication requirements.

Having completed a pre-course programme all NCAITC cadets were moved into Jackson Block to prepare for the start of their course. Cadets were nominated for certain roles and the cadet in charge of Charities (Aircrew Cadet Tempest-Roe) created a committee to help distribute workload, thus increasing the efficiency of the course charity project.

The first challenge facing the committee was to find a suitable subject for fundraising. It soon transpired that College Hall Officers' Mess (CHOM) was hosting an 'Anthems in the Park' event during which special guests Brian May and Kerry Ellis were to perform. Liaising with the event management, the charities committee secured one tent intended for a private auction and a second tent housing event programmes and glow stick products, of which profits were destined for the Royal Air Force Association (RAFA) and Royal Air Force Benevolent Fund (RAFBF). The charity committee were only too aware that in order to host an effective private auction at the event, they would need to attain items both suitable for auction and also aimed at the audience due to attend. Fortunately, NCAITC 248 managed to utilise a community working weekend at the RAF Waddington air show, where they seized the opportunity to appeal to the public and the multiple businesses who attended, for donations to the private auction. The response turned out to be extremely supportive and the NCAITC left RAF Waddington with some superb gift donations for the up and coming Anthems in the Park event.

Members of NCAITC 248 at the 51 Sqn Memorial Garden, Snaith.

Before the event however, NCAITC travelled to Yorkshire to visit the 51 Sqn memorial garden in Snaith. This superbly maintained memorial commemorates those who lost their lives with 51 Sqn during World War 2. The cadets found this a fantastic, very worthwhile visit and were more than happy to do their part helping such a worthy cause. The memorial secretary Mrs. Renee Ounsley donated some fascinating books she herself had written regarding some of the varied lifestyles and jobs of aircrew who served on 51 Sqn. In the memorial garden community project, NCAITC 248 trimmed hedges, painted fences, weeded the borders and helped to clean the garden.

NCAITC 248 helped out the running of the RAF Waddington Air Show as part of another project weekend. The event was inevitably hectic but project weekend IC (Aircrew Cadet Leivesley) liaised well with event organisers. Cadets helped event organisers with parking, clearing FOD, setting up stalls, erecting tents and assisting security.

With RAF Waddington Air Show over, and Anthems in the Park rapidly approaching, Cadet Bullas worked around other course commitments to produce a brochure illustrating the different items available for the private auction. These were inserted into the event programmes to encourage as many people to view the auction tent as possible. As the Anthems in the Park began, cadets focussed on selling event programmes and glow stick products to the public. Other cadets were placed in the careers hut, on security and in the private auction tent. Programme and glow stick selling was slow initially, but as the event went on, more and more were sold; a similar trend followed in the private auction tent. By the end of the concert, the private auction tent had received some very respectable bids amounting to an impressive £2103. Programmes and glow stick products sold amounted to a superb £2830.81, making a grand total of £4933.81.

NCAITC sell programmes during the Anthems in the Park event.

The NCAITC were certainly in high spirits after this valiant effort, but the push for course charity fundraising was far from over. Items left over from the private auction needed to go and there was no better way to do this than to organise a charity social evening. The social evening had a cocktail theme and was limited to NCAITC cadets and staff only. Aircrew Cadet Tempest-Roe's enticing auction skills lead to a further £670 being made by items ranging from the quirky to the high-end, with the top seller being a signed Red Arrow print which went for £370; a very successful evening!

As a result of all their fundraising efforts, NCAITC 248 amassed over £8000, an extremely impressive amount of money given the intensity of the course and relatively short period of time. Beneficiaries of the funds were RAFA, the RAFBF, Rothbury House, St Clement Danes Church, the 51 Sqn Memorial Garden and the Lincolnshire branch Cystic Fibrosis Trust.

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Non-Commissioned Aircrew Initial Training Course (NCAITC): What We Do

Cadet S Naylor and Cadet D Larner, NCAITC 254, Officer & Aircrew Cadet Training Unit

We have not been in the RAF long, yet in 11 weeks time the 9 of us on the current NCAITC are expected to graduate as credible SNCOs, heading to RAF Shawbury to complete Air Traffic Control (ATC) training. Before we arrived at Cranwell, we undertook Basic Training at RAF Halton for 9 weeks. At the moment, life in the RAF has been nothing but training and it is safe to say that for the first 2 years of our RAF careers we will be in some form of training environment.

The NCAITC is just over 70 days long, and is said to be one of the most physically demanding Phase 1 courses in the RAF. There was a lot of anxious and worried airmen as we'd come straight from the Basic Recruit Training at Halton where we spent 9 weeks being transformed into Airmen and Airwomen from our previous civilians lives. The strict environment controlled by Corporals and Sergeants regulates when to wake up, when to be in class, when to eat, when to turn the lights out and when to be in bed. We did not have much freedom there, so feelings of trepidation when we saw the iron gates of the College Hall, knowing that we will be dealing with Warrant Officers and Master Aircrew and not Corporals, was understandable.

The NCAITC Mission Statement is *"to deliver air minded training and the necessary leadership skills required to produce credible, motivated, physically and mentally robust SNCOs in order to undertake specialist Phase 2 training"*. Straight away during the initial meeting with the flight staff on the familiarization visit, it was clear that the NCAITC was different from Basic Training at RAF Halton. We weren't marched into a room, nor told in any certain terms that the next few weeks will be the worst we'd ever experience. Instead we sat down and introduced ourselves to the flight staff and talked about what to expect when we came to RAFC Cranwell for the NCAITC.

Day 1 of 'Induction Week' soon comes around with early morning inspections looming and evenings of preparing our kit. In some ways the course is effectively contributed to heavily by the Cadets, for example it is up to us when inspections can lessen. We can be rid of them within 3 weeks if the standard is high enough, with shirts creased to perfection, shoes gleaming (including the soles as well as the leather) and the block free of any dust. From the fire extinguisher in the foyer to the outside taps, dust is not allowed to exist and everything must be gleaming. As previously mentioned, we were expected to graduate from the course as credible Sergeants; so the high standards we expected in order that in the future we could aid the progression of subordinates and set the very highest standards ourselves. Luckily for our course, we managed to limit the continuous early morning inspections to just over 2 weeks. The early starts at 0530 for the 0705 inspections were no more so we were able to indulge in just a little more sleep before the daily Physical Education (PEd) sessions first thing.

PEd was undertaken on the first period each day that we were not on Exercise, which resulted in us becoming very physically fit and robust. From circuit training to Battle PT, and swimming circuits to aero runs up and around 'Cardiac Hill', the NCAITC push everyone to their physical limit. This is all designed to get us fit for the Exercises that we undertake throughout the course. Before we do all of the dynamic leads at Cranwell, Stanford Training Area (STANTA) and Otterburn, we undertake lessons at Cranwell. We learn a myriad of subjects including Essential Service Knowledge, how to conduct drill and carry out inspections, as well as the all important theoretical leadership and navigation practice. All of this is designed to aid us on our way to passing the course and venturing into the RAF as credible SNCOs.

Just as when we eventually get into the wider RAF, there are additional duties which need to be carried out whilst on course. So as well as the lessons and practical leadership, we undertake specific jobs across a wide spectrum of responsibilities, such as course photographer, PEd representative, course journal writer, charity organizer and MT representative. We also have to organize the dynamic leadership weeks: Initial Practical Leadership Training (IPLT); Additional Practical Leadership Training (APLT); Ex SOUTHERN BORDER; and our final assessed leadership exercise, Ex BORDER PATROL. Each of these Exercises is led by a single cadet who briefs the course on how the week will run and allocates the individual specific roles to the cadets. Each person on the course will gain the knowledge on how to organize an Exercise or trip in the future, so it is all viewed as essential training for what is initially a very steep learning-curve.

The Exercises are a week long and of increasing difficulty, culminating in Ex BORDER PATROL. This Exercise is an assessment of leadership ability yet, possibly because we are conditioned by this stage, does not feel as physically demanding as the previous Exercises; however, it is no walk in the park! This phase of the course begins with Ex IPLT, which is based on the North Airfield of RAFC Cranwell. This is the introductory exercise to the dynamic leads and the much loved pine poles and 'hernia boxes'. Every cadet has 2 leads during the week which, for our course, meant a total of 18 leads. In this scenario, RAFC Cranwell experiences terrorism, floods and many aircraft incidents, all of which must be sorted by the cadets to varying degrees of competency!

Ex APLT follows next, at STANTA near Thetford, Norfolk. The cadets experience field conditions whilst living out under shelter sheets. The scenario sees the cadets assisting the civilian authorities in searching for 2 missing persons from the local area. The cadets are asked to support helicopter operations, search the ground and move vital equipment to support the search. As the week develops and information is found, the leads develop towards Vehicle Check Points (VCPs) and similar real-time tasks. Ex APLT is designed to condition the cadets to carry heavier kit for a longer period of time, almost twice as far as previously, and to develop more lateral thinking to solve problems. At the end of each day the cadets have to make their way back to their accommodation, where they eat their rations and carry out relevant personal admin tasks to prepare themselves for the next day's tasks.

The final 2 Exercises are held at Otterburn, near Newcastle, where Ex SOUTHERN BORDER is the first real introduction to contours, and the physical demands these place when carrying the same equipment as on Ex APLT. Accommodation has been upgraded to the standard 12' x 12' tent with generators and camp beds. Ex SOUTHERN BORDER is the final chance for cadets to prepare for the assessed Exercise 2 weeks later on Ex BORDER PATROL.

Ex BORDER PATROL is a return to Otterburn for the leadership assessments. This time the cadets are accommodated in the shelter of a derelict cottage and, if all goes well, they only need to take one lead. However, should anyone be unsuccessful in their lead they will be offered one final attempt to prove they can pass the leadership phase of the course. These leads really represent what the cadets have been through over the past 10 weeks and the leadership and standardisation skills are now refined to the high degree. Every cadet gives 100% on each and every lead in order to demonstrate both good leadership and vitally, great followership.

All of this culminates on graduation day with a ceremony in the Rotunda of College Hall and the Graduating Luncheon in the WOs' & Sgts' Mess. Cadets find out on preceding Tuesday if they have been successful or not - if they have been, they graduate on a Friday, with family and friends around them for that very special day.

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May 2013 - Remedial Training (11)

Delta Flight Remedial Training Overview 2012 – 2013

Flight Lieutenant Tiffany Lamont MA RAF, OC Delta Flight, Officer & Aircrew Cadet Training Unit

For some Officer Cadets, the road to the Graduation Parade is not always as smooth as they would like. In a 9-month period, virtually anything can (and does) occur; family, health, personal, or training issues, can all deflect a trainee from achieving a single-shot trajectory through Phase 1 Training. 'Delta Flight' exists to reinvigorate, re-motivate and reset those cadets who have, for whatever reason, found themselves requiring a little further instruction at various phases of the course. Here, Flt Lt Tiffany Lamont explains how Delta Flight can take a wayward cadet, and set them back on the right path.

During the past 12 months Delta Flight has been supporting cadet development through remedial training and coaching. In addition to delivering training to Initial Officer Training (IOT) and Specialist Entrant and Re-Entrant (SERE) cadets, Delta Flight also delivers training to Non-Commissioned Aircrew (NCA) cadets who have not met the required standards. Although the Strategic Defence and Security Review 2010 (SDSR 2010) has resulted in a reduction of cadet numbers this had not altered the way in which we carry out our business; the aim remains the same, *"To attract, select and recruit the Air Force of tomorrow, whilst training and developing the Air Force of today and fully supporting the Defence Vision"*.

The Delta Flight role is to reinforce that training and unearth the potential that was identified during initial selection at the Officer and Aircrew Selection Centre (OASC). New in post and with a new Deputy Flight Sergeant, the current OC Delta Flight is in an ideal position to look at the training with a fresh pair of eyes. What we have found is the focus for Delta has been to target early. By speaking with 'Main Squadron' staff throughout the Term, and before the cadets have been selected for remedial training, we get a better understanding of the cadet's needs and areas for development. This then enables each package to be specific in design and better prepared to target particular areas. This ultimately ensures the success of the courses.

There are 3 reasons why a cadet may be placed on one of the remedial packages: firstly, to give 'at risk cadets' the best possible chance of succeeding the following term; secondly, for 'failed cadets' that have been unsuccessful in reaching the standard required for leadership or Officer Qualities; and thirdly, for cadets 'volunteered' by their instructors as people who would benefit from additional training. The challenge for the Delta Flight staff is to find the appropriate training opportunities, to give these cadets the best possible chance to address and develop their areas of shortfall. Delta Flight introduced 3 reinforcement and remedial leadership training packages which are known as R1 (following Term 1), R2 (following Term 2) and R3 (following Term 3 but also resulting in a 10-week recourse in training).

The R1 package is for cadets who are assessed as requiring further leadership and/or Officer Qualities training at the end of Term 1. This means those who have not met the required standard at the end of Term 1 or who are thought to be 'at risk' are strongly recommended to take the R1 package. From a cadet perspective, they can see this as a punishment and a loss of their between-term leave. In actual fact this could not be further from the truth, indicated by one such cadet on a recent course critique, *"What the cadets have been taught and learned both from their own leads and watching others has far exceeded what most of us believed would be possible in such a short space of time. Overall the cadets have enjoyed the package more than they initially thought"*.

The cadets undertake the R1 package during the Staff Continuation Training (SCT) period and rejoin their original IOT course for the start of Term 2, thus avoiding the traditional 'recourse'. The training package is 5 days long, and as such is a very limited amount of time to address a multitude of areas ranging from under-confidence, over-confidence, a lack of emotional intelligence, or command language to name but a few. In order for the package to be effective it is intense, and feedback is delivered in an alternative manner to maximise impact. The cadets are under no illusions as to why they have been put forward. The cadets receive further leadership theory lessons which are facilitated, and which reinforce areas such as Action Centred Leadership (ACL), planning, emotional intelligence and mission command. Following a table-top planning exercise the cadets undertake a practical 'Rapid Planning Day' on the North Airfield. Previously the focus was on Force Protection and involved contact-under-cover extraction drills. Following a SWOT analysis this was changed to focus on leadership and Officer Qualities through practical application. The Rapid Planning Day (25 min leads to plan and achieve the task), enable Delta Flight to identify the cadet's base-level and identify areas to work on, such as coaching through focusing on self-esteem, confidence and command presence. Officer Qualities are also monitored and coping strategies implemented throughout. The training benefits are immense: cadets identified by their Squadron as having 'weak' leadership or under confidence have a minimum of 2 leads each to enable additional coaching and practice, which more than doubles the overall capacity for leads during the R1 package. Moreover, this creates additional time for Delta Flight to build rapport and gain trust thereby enabling root causes to be identified and coping strategies implemented earlier than previously achieved. It also enables the cadets to try out more ways of conducting their own leadership style, taking risks, gaining a deeper understanding and increasing their self-esteem and confidence. All of this builds towards the cadets' understanding and confidence for undertaking the final Ex DELTA DYNAMO.

Cadets are placed on the R2 package if they have not met the required standard in Term 2, and in particular those who have failed their leads during EX DECISIVE EDGE 1. They undertake the R2 package during the SCT period before they rejoin their original IOT course for the start of Term 3. The R2 package is 10 days long and covers both leadership and Officer Qualities. During this time the emphasis is very much on them drilling down to the root cause and accepting responsibility for their actions. In doing so, the R2 cadets undertake the R1 prior to deploying to STANTA on Ex DELTA PRIME. This is one of the most physically demanding exercises and puts the cadets into 'stretch'. They really have to work together and give each other honest feedback without the overhanging feeling of being assessed. EX DELTA PRIME provides the cadets further opportunity to explore their leadership as well as their followership. In addition the leads can be manipulated to ensure that optimal training opportunities are embraced. Building on their Officer Qualities, R2 cadets coach R1 cadets under the supervision of Delta DS. This proves very useful in a number of ways; firstly, the R2 cadets see how far they have progressed within 20 weeks; secondly they are in an ideal position to give effective feedback to the R1 cadets having recently undergone Term 1.

In addition to the Ex, the R2 package uses the Myers-Briggs Type Indicator (MBTI) as a key training tool for cadets highlighted with poor Officer Qualities. Having recently undertaken the training myself, I can see the vast potential for developing cadets and have witnessed the 'light bulb moment' when a cadet is able to put the pieces together. The tool is instrumental in assisting cadets understand themselves better and how they interact with others, helping them improve how they communicate, work and learn. For many of the cadets this personality-type theory has profound results, as described in a course critique which read: *"It was an awakening of how we are perceived".*

Generally cadets placed on the R3 Package are there for Officer Qualities, and they are recoursed by 10 weeks. During this time the cadets undertake the R1 and R2 packages in which they are heavily involved in the mentoring of the R1 and R2 cadets. In addition to the Exercises, R3 cadets undergo an office simulation which aims to expose cadets to the type of work they will be expected to complete as a junior officer. This ranges from writing Visit Instructions, dealing with telephone and e-mail 'injects', carrying out Flight Commander roles (e.g. interviews), and presenting briefs. All of these elements aim to improve the cadets' oral and written communication as well as their ability to plan, prioritise and manage their time effectively. Furthermore, the cadets are tasked with organising 2 one-day staff rides. The photos below are examples of where the cadets have previously chosen as their destination, the National Arboretum.

During these tasks the cadets take complete ownership and responsibility with regard to preparation, documentation and management of the day as well as delivering a brief on their chosen stand.

The R3 package also sees the cadets delivering a number of presentations, ranging from 10 to 20 minutes, covering both military and civilian topics. This helps to highlight why it is important to be a good presenter as an officer. Towards the end of the remedial training, and before the cadets join their new Squadron, they undergo Adventurous Training with the Term 3 cadets. This provides an opportunity for the R3 cadets to get to know their new course and start bonding with their new peers. Following on from this, the R3 cadets begin assisting with the planning and preparation for the deployment on EX DECISIVE EDGE 2. They have now been given a number of additional tools and strategies to assist them with their next phase of training at OACTU.

Overall, the Delta remedial training packages aim to develop and build upon the cadets' confidence and Officer Qualities. In order to make the assessment as objective and evidence-based as possible, Delta Flight use the RAF Leadership Attributes, in addition to the areas highlighted within the RAF Ethos & Core Values. The RAF Leadership Attributes document is pivotal and robust, and is used as a gauge for Officer Qualities to ensure objective formative assessments are undertaken. The cadets who come through the various training packages all conclude they have benefitted and are better equipped not to just pass through IOT, but to continue with their careers within the Royal Air Force as Junior Officers. The reduction in cadet numbers following SDSR 2010 has not impacted on the work we carry out, but has meant we can target the training to individual needs. As Squadron cadet numbers increase, our role within Delta will remain and our focus of targeting earlier will only serve to increase our effectiveness.

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OFFICER & AIRCREW CADET TRAINING UNIT (OACTU)

The ultimate training entity

The main course consists of 3 terms, namely the Foundation Term (teaching), Development Term (developing) and the Applied Term (exploring). Each term is 10 weeks in duration and there are periods of leave at the end of the first 2 terms. A recommendation for graduation will be confirmed at the end of the third term, subject to a continued positive attitude to training and successful performances on all assessed events during the term. The underpinning elements of the Course are based on the Ethos, Core Values and Standards of the Royal Air Force, namely, Respect, Integrity, Service and Excellence and the efforts of the cadets during the Course are recognized with the award of a graduation with Pass, Merit or Distinction.

Foundation Term. During the Foundation Term, the cadets undergo an intensive programme of Command and Control Leadership, Physical Education, Drill and Military Skills Training. They also undertake self-awareness and team building training at the Force Development Training Centre, Fairbourne. Cadets undertake a number of leadership exercises designed to help in the development of an individual's leadership style. These exercises start in the OASC hangar, with simpler tasks and build up to a small scale deployment in week 10 for 5 days at Beckingham ranges on Exercise ACTIVE EDGE. Term 1 also sees the start of the Air Power Studies (APS), delivered by the lecturers of Portsmouth Business School. This includes lectures and Syndicate Room Discussions, when a cadet is chosen to research then lead a discussion on a specific APS topic. The term's APS work culminates in the first of 2 essay based examinations. Subject to a successful completion of all elements of the term, cadets will progress to the second term.

Development Term. The second term continues to develop the leadership skills of the cadets by introducing them to transactional leadership and the concepts of Mission Command. Cadets undertake 2 leadership deployments, the first of which takes place at an Army Training Area where the scenario underpins the type of activity military personnel would engage in when offering aid to the Civil Authorities. The second leadership exercise is Exercise DECISIVE EDGE 1 held at RAF Syerston, where the cadets are tested on their leadership abilities as they provide the Force Protection for a large-scale 10-day exercise on an austere Deployed Operating Base (DOB). The Exercise simulates the expeditionary nature of current RAF operations, with cadets living in tented accommodation. The term also incorporates a continuing educational programme during which cadets are taught about Air Power and submit a 1500 word academic paper (The Bandar Essay) on a related topic as well as sitting the second APS examination.

Applied Term. Having been given a re-commendation for progression to Term 3, the emphasis of the third term is on the continued empowerment of the cadets, whereby they are given increasing responsibility for their own development as junior officers. Cadets undertake a 4-week Carousel Period, during which they complete the 2-week Basic Air Warfare Course; a self-organized one week leadership training exercise to Force Development Training Centre, Grantown-on-Spey and the 2-day Care in Leadership Course at RAF College Cranwell or Amport House, led by Padres. Upon return from the Carousel, cadets undertake a planning exercise, using the estimate process, in preparation for their second deployment to RAF Syerston on Operation MUCRONIS BLADE, otherwise known as Exercise DECISIVE EDGE ll. This assessed exercise runs concurrently with Exercise DECISIVE EDGE I. It provides cadets with the opportunity to undertake 48 - 72 hours of command leadership roles in a simulated Command Operations Centre, where they are responsible for running all aspects of the DOB. Subject to a continued satisfactory performance throughout the term, the cadets are recommended for graduation.

Validation for the extant IOT course came in December 2015 in the form of an Ofsted inspection. Ofsted began inspecting the effectiveness of welfare and duty of care for recruits and trainees in the Armed Forces in 2008. The Armed Forces recognise the importance of providing safe and secure training environments that will enable the 15,000 plus people who every year enter the initial training system to recognise their full potential; the 3rd party audit provided by Ofsted helps to assure this process. RAFC Cranwell received the highest grading of 'Outstanding' in all criteria examined by Ofsted – a first for any military training establishment.

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August 2016 - OACTU (12b)

In the last quarter of the year the RAF's successes in the Strategic Defence and Security Review (SDSR) necessitated an increase in RAF recruitment's Into Training Targets in order to man the uplift in airframes prescribed in the SDSR. Consequently, the number of Graduations delivering the requisite increase in officers to the Phase 2 schools needed to increase; to facilitate this the extant IOT course will change from the current 34 weeks to a 26-week course. This change will be delivered, with the first full 26-week course commencing, in April 2016.

THE INTER-COLLEGIATE GAMES

Sports teams from the RAF College visited the Air Academies in both Breda, Holland and Salon de Provence, France, and on both occasions the RAFC Cranwell cadets demonstrated determination in the sporting arena. Unfortunately, on both occasions, neither event yielded an overall victory as the Netherlands Royal Military Academy proved too strong for our team and Ecole de L'Air an equal match with a draw overall. Unfortunately there was not a 2015 competition involving the UK Military Academies because RMA Sandhurst, Dartmouth and the RAF College's programmes were not able to be aligned. There is a competition planned for 2016 to re-invigorate the Inter Service rivalry and foster positive relationships between the 3 Services. The RAF Officer Cadets also competed against the Cranwellians Association members, including the CAS and Sir Stephen Dalton, however the strength in maturity over shone the Junior members of the RAF and the Cranwellians Association proved victorious.

A SQN NON-COMMISSIONED AIRCREW INITIAL TRAINING COURSE

A Sqn delivers a series of short courses aimed with the provision of initial training to a more focused audience in a condensed time frame

SPECIALIST ENTRANT AND RE-ENTRANT (SERE) COURSE

The SERE Course is currently an intensive 11-week package beginning with a one week induction package to introduce the cadets to drill, PEd and leadership theory. This is followed by the main 7-week leadership and officer development phase culminating in Exercise VITAL EDGE, which is an applied leadership exercise undertaken at Beckingham Training Area. The final 3 weeks of the Course consist of further officer development, academic work and preparation for graduation.

The Leadership Training syllabus is a condensed version of that used on the 30-week Initial Officer Training Course (IOTC) and forms the largest element of the Course. The syllabus commences with intense theoretical training in the classroom and continued with a 3-day Force Protection-based scenario at Beckingham Training Area. The basic principles of command and leadership are put into practice during a 5-day Field Leadership Training Exercise held at Stanford Training Area. The students also experience field living conditions during these exercises. The leadership training culminates with their deployment alongside their IOTC colleagues on Exercise VITAL EDGE. The students first have to pass their main leadership test alongside their IOTC colleagues from the Intermediate Sqn before joining cadets from the Senior Sqn carrying out A1-9 roles in the Combined Operations Centre at Grantham Barracks on Ex DECISIVE EDGE.

Other subjects covered within the syllabus included an introduction to the conventions of Defence Writing, Oral Communication, Air Power Studies, Land Navigation and Essential Service Knowledge. Extensive lessons in PEd are also programmed. For the majority of the syllabus the SERE cadets are integrated wherever possible with their main IOTC counterparts during instructional periods. The students take part in social activities in which they are likely to be involved as officers in the RAF. They attend a Meet and Greet evening, Training Dining-In Night, Cadet Drinks and Graduation Dining-In Night; all of which have introduces them to the formal and informal aspects of Mess life.

The culmination of all the training objectives above creates an intensive, quick paced course that develops Specialist Entrants and Re-entrants into credible Junior Officers of the RAF.

ROIT

This cohort has a very healthy output of short courses, some of which are polar opposites from each other and all of which have a rather eclectic student base.

RESERVES OFFICER INITIAL TRAINING (ROIT)

There are both similarities and differences from the main IOT cohort. In terms of similarities, ROIT candidates are subject to the same OASC process as their full time peers. Conversely, there is no direct entrance scheme to a reserve commission. They have to have served in the ranks back on their parent unit and passed the Reserves Phase 1, Basic Recruit Training Course at RAF Halton before applying to commission.

The course attracts a bewildering cross section of achievers from society at large. Previous cadets have included retired hedge fund managers, a female British Airways pilot, a number of NHS consultants and a strategic level manager from BT to name but a few.

In terms of the programme, they will have to complete 4 training weekends, split into 2 weekends set either side of a 16 day residential course. During the course, ROIT cdts are sequenced with the SERE course and undergo the same testing strategy. Whilst it is not mandated, almost without exception, ROIT cdts will remain at RAFC Cranwell for a further 4 days of ceremonial training in order to graduate with IOT and SERE. This, by the very nature of being a reserve, is all undertaken during their time of work.

THE COMMISSIONING WARRANT OFFICERS COURSE (CWOC)

The CWOC is now a 4 week course comprising of 2 weeks of training in order to prepare the individual for the transition to Junior Officer (ergo from the top of one tree to the bottom of another) and, post Graduation, the Basic Air Warfare Course (BAWC). Well received by those who have attended, the CWOC has a mix of guest speakers and academic presentations to best prepare them for their new appointment. There is also plenty of drill to massage their trepidations at being mercilessly thrown in with IOT and SERE for graduation practice after what

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has quite often been a career spanning decades of dodging any and all parades.

THE UNIVERSITY INDUCTION COURSE (UIC)

This is the polar opposite of the CWOC with the UIC being aimed at those at the very start of their RAF journey. The UIC is to prepare and qualify those young men and women have been selected for an RAF bursary in order to complete a degree. Typically 40 strong, the course programme includes rudimental leadership lessons, initial kitting, and RAFFT and swim test. The course is conducted over a period of 4 days.

THE UNIVERSITY AIR SQUADRONS ACTING PILOT OFFICERS COURSE (UAS APO)

The cream of the UAS, selected to attend a 10 day leadership course. A thoroughly enjoyable course with forward leaning, highly motivated university students who soak up what they are taught. The course includes a 3 day practical leadership exercise and culminates with a graduation ceremony. Successful candidates return to their UAS, holding the influential rank of Acting Pilot Officer and will adopt the role of coach and mentor to the junior sqn members as well as drive the direction of the unit forward.

NON-COMMISSIONED AIRCREW INITIAL TRAINING COURSE (NCAITC)

NCAITC provides the foundation skills, values and knowledge required to enter specialist training as responsible, professional and effective Air minded SNCOs. NCAITC cadets will already possess basic military skills, having joined direct from the Basic Recruit Training Course (BRTC) at RAF Halton, or having previously served in the ranks. The Course is intensive, with challenging training designed to quickly develop leadership and SNCO qualities in arduous, testing conditions. Cadets will undertake initial navigation and leadership exercises at RAFC Cranwell, progressing on to further leadership exercise at STANTA in which the cadets are required to 'bivvy' out, reducing their capacity and increasing their fatigue. Final training serials are conducted at Otterburn Training Area (OTA) before the tested phase which is also completed on OTA. All of our training and exercises aim to produce a courageous and determined fighting spirit, mental agility and physical robustness, an ability to handle ambiguity and a myriad of other traits and qualities we not only expect, but ultimately require, of our prospective future RAF SNCOs.

CHARITY

Over the course of 2015, elements from SERE, ROIT and NCA worked both collaboratively and independently to raise in excess of £3410 for an array of deserving charities including, but not exhaustive, The Royal Voluntary Service, Lincolnshire and Nottinghamshire Air Ambulance and the Soldiers, Sailors and Air Force Association (SSAFA).

B SQN, IOT 40

Initial Officer Training Course No 40 (IOTC 40) graduated with 90 cadets on Thursday 24 September 2015. Of these, 13 cadets graduated with a distinction (score over 123), 41 cadets graduated with a merit (score over 106) and the remaining 36 cadets graduated with a pass.

The Sqn performed highly across the duration of IOTC 40. The cadets made steady but consistent progress in each of the leadership exercises. Exercise DECISIVE EDGE 2 took place in Sep 2015 and was the last to be delivered on IOT in its current form. The exercise enabled cadets to operate from a deployed Command Operations Centre and to utilise the 7 questions Estimate process to plan and execute a successful deployment to RAF Syerston. The extensive planning phase leading up to the exercise proved invaluable for the cadets, resulting in a successful deployment. Whilst the overall concept of the exercise will remain the same, future Exercise DECISIVE EDGEs will be delivered in the Combined Operations Centre training facility at the Prince William of Gloucester Barracks, Grantham.

Throughout IOTC 40 the cadets and staff attended the following visits:

a. In Feb 15, 30 cadets and 2 staff from IOTC 40 visited the French Air Academy for the Intercollegiate Games.

b. In Apr 15, one member of staff from IOTC 40 visited the Turkish Defence Academy.

c. In May 15, 30 cadets and 2 members of staff from IOTC 40 visited the Dutch Air Academy for the Intercollegiate Games

d. In Jun 15, one cadet and member of staff from IOTC 40 visited the Paraguayan Defence Academy.

e. In Jun 15, 16 cadets and 3 members of staff from IOTC 40 were involved in a staff ride to Brussels. The visit was designed to increase cadet knowledge of military history; in particular World War 2 focussed sites.

f. All members of IOTC 40 travelled to London to visit the RAF Club and the RAF Museum at Duxford. The visit included a fireside chat with the Chief of the Air Staff at RAF High Wycombe. This enabled the cadets to gain a greater appreciation of RAF heritage and the current strategic focus, discussions surrounding the New Employment Model, manning levels and proved immensely valuable.

g. In Oct one member of staff and two recently graduated officers visited the Republic of Korea's Air Force Academy. This was an excellent visit that allowed both staff and newly graduated officers to exchange ideas and debate the benefits of the OACTU trg syllabus with allied partners that operate a very different trg environment. The interaction with these nations has improved understanding of the RAF commissioning scheme and projected the RAF in a positive manner with both the hosting and attending nations. There would be numerous benefits in delivering this type of International Defence engagement at RAFC Cranwell. The high level of interest in OACTU was overwhelming and our ability to train our officers in such a short period in comparison to the trg systems of the other attendees. However, it is acknowledged there would be a considerable financial commitment required by the College to provide a visit programme that could match that of the ROKAFA International Week.

During the 9 months of training at RAFC Cranwell, IOTC 40 represented the College in 2 Intercollegiate Games (ICG). During Term 1 IOTC 40 personnel represented the College against the French Air Academy resulting in an overall win for the RAF. In Term 2 IOTC 40 personnel competed against the Dutch Air Academy in the Netherlands resulting in another win for the RAF.

During Term 2, IOTC 40 personnel represented the College in 2 away fixtures versus both the French Air Force (FAF) and the Dutch Air Force (RNAF). The results from these 2 fixtures were a win against the French, but a defeat against the Dutch.

In total IOTC 40 raised £8490 for charity. The money was donated to 3 chosen charities:

a. Action Duchenne
b. Combat Stress
c. The Lincolnshire and Nottingham Air Ambulance.

In addition to this, a number of personnel from IOTC 40 volunteered at Woolsthorpe Manor helping to maintain the historic home of Isaac Newton.

C SQN IOTC

Initial Officer Training Course No 41 (IOTC 41) graduated with 81 cadets on Thursday 17 December 2015. Of these 11 cadets graduated with a distinction (score over 123), 38 cadets graduated with a merit (score over 106) and the remaining cadets graduated with a pass.

The Sqn performed highly throughout the duration of IOTC 41. Exercise DECISIVE EDGE 2 took place in Dec 2015 and was the first to be delivered on IOT from Prince William of Gloucester Barracks in Grantham. The exercise enabled cadets to operate from a deployed Combined Operations Centre and to utilise the 7 question estimate process to plan and execute a successful deployment. The extensive planning phase leading up to the exercise proved invaluable for the cadets, resulting in a successful deployment. There were some learning points, as was to be expected with a new exercise format, but the cadets learnt a great deal and feedback was extremely positive.

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August 2016 - OACTU (12d)

Throughout IOTC 41 the cadets and staff attended the following visits:

a. In Sep 15, 17 cadets and one staff member from IOTC 41 visited France and Belgium for a battlefield tour of leadership and air power in WWI and WWII.

b. In Oct 15, one member of staff from IOTC 41 visited the United States Air Force Academy (USAFA) Colorado Springs, Colorado, USA. This was part of the annual 'International Week' which the Academy holds and invites representatives from around the world. The week comprised of time with the USAFA cadets, visiting their facilities, and excursions into the local area all the while developing international relations and links between personnel of different Air Forces.

c. In Nov 15, IOTC 41 and 7 members of staff visited the London RAF Club, RAF Bomber Command Memorial and RAF Museum Hendon. The visit included a fireside chat with DCAS and enabled the cadets to look at the more strategic focus of the RAF.

Off Cdt O'Boyle ran the London Marathon, coming an incredible 73rd out of 38,000. He took part in a number of other races, including the South Downs 100 Mile Relay event, the Combined Services 10 Mile Inter-Area Race in Nottingham, the RAF v Cambridge Uni v East of England race and he also ran in the Combined Services Half Marathon Inter-Area Race in Cardiff.

Off Childs competed in the RAF Inter Stations Inter Services Hockey Tournament at HMS Temeraire.

Off Cdt Bird swam 50m & 100m Backstroke in the RAF Inter Station Swimming Champs at RAF Cranwell.

Off Cdt Gibbens cycled 61 miles for the Change Gear cycling event in Nottingham.

In total, IOTC 41 has raised £2,393.64 for charity. The chosen charity to receive the donation is Educate 4 Life.

D SQN IOTC

Initial Officer Training Course No 39 (IOTC 39) started on 13 Oct 14 with 87 cadets and graduates with 63 cadets on 18 Jun 15. Of these, no cadet graduates with a Distinction (score over 151.5), one cadet graduates with a Merit (score over 136.5) and the remaining 62 cadets graduate with a Pass. The Course structure is at Annex A, the student numbers are at Annex B and the details of prizewinning cadets are at Annex C.

Course performed well in the field, making steady progress during early leadership exercises. For the second Exercise DECISIVE EDGE the course utilised the Estimate process to plan and execute a successful deployment of 159 cadets to RAF Syerston. The establishment of a dedicated EAW planning facility greatly improved the ability of the cadets to adequately plan, rehearse and initiate the deployment. The deployment phase of the Exercise ran smoothly and was well led by IOTC 39 operating from the Command Operations Centre.

As part of the course content, the cadets and staff of IOTC 39 travelled to London to visit the RAF Club and the RAF Museum at Hendon. This visit, which also includes a fireside chat with the Chief of the Air Staff, is designed to inform the cadets of what the RAF was like in the past and what they can look forward to in the future.

During the 9 months of training at RAFC Cranwell, IOT 39 has represented the College in 3 Inter-Collegiate Games (ICG). During Term 1 IOTC 39 personnel represented the College versus the British Army at the Royal Military Academy Sandhurst, resulting in an overall win for the RAF.

During Term 2, IOTC 39 personnel represented the College in 2 away fixtures versus both the French Air Force (FAF) and the Dutch Air Force (RNAF). The results from these 2 fixtures were a win against the French, but a defeat against the Dutch.

Throughout the duration of IOTC 39 the cadets took part in a number of charity events in order to raise money and awareness for their chosen charities. In sum a total of £8017.00 was raised and donated to the RAF Benevolent fund.

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1980 - SERE Training (1)

INITIAL OFFICER TRAINING FOR THE SPECIALIST ENTRANT AND RE-ENTRANT OFFICER

How/whom/what/when/why should I salute? . . . How will I recognise an airman/Air Marshal? . . . How do airmen get paid? . . . HOW DO I GET PAID? . . . What are my responsibilities as an officer? . . . The answers to these and many related questions are to be found in the 18 weeks of initial officer training (IOT) during which the new recruit becomes accustomed to the Service way of life and gains an understanding of his responsibilities on being awarded his commission. However, for the students of the Specialist Entrant and Re-Entrant (SERE) course, these questions are real and immediate as they are already commissioned on arrival. These students have only four weeks in the Department of Initial Officer Training (DIOT) in which to lay the foundations of their Air Force careers, a brief period indeed in which to absorb a wealth of information and equip themselves with the skills and attributes required of them. The primary aim of this article is to show how the SERE course helps them attain these objectives.

The SERE Course caters for those whose commission has been gained by virtue of their professional qualifications or on the strength of their previous commissioned service in either the Royal Air Force or one of the other United Kingdom or Commonwealth Armed Services. The course had been previously run by the Officer Cadet Training Unit at Jurby, Feltwell, and, more recently, Henlow, before arriving at Cranwell in January 1980. Prior to 1974 it was known as the Professionally Qualified and Re-Entrant (PQ&RE) course, or epitomizing the short service terms of many of its members, as "Pick one Quick and Retire Early". The aim of the course is to introduce newly commissioned officers of the Medical, Dental, Chaplains and Legal Branches, Princess Marys' Royal Air Force Nursing Service, Royal Auxiliary Air Force, Royal Air Force Volunteer Reserve and re-entrant Officers of all branches, to the Service way of life, its administration generally, and to their responsibilities as officers. A slight variation on the syllabus is also provided for officers of the Royal Observer Corps. The course therefore has to cater for a wide variety of backgrounds and vastly differing levels of experience. Nine courses are run during the calendar year and, with numbers averaging 16/17, and a maximum intake of 20, a 2 flight system is operated.

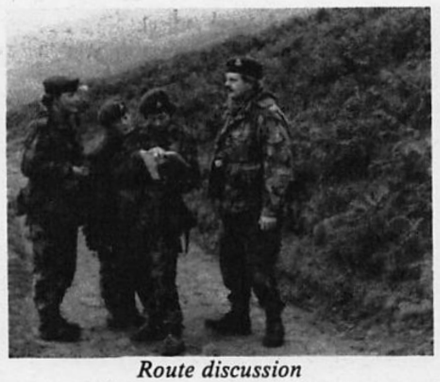
The course covers all the subjects taught on the basic IOT course but in the limited time available there is only scope to give the very broadest of broad brush treatments to any one subject. There is much reliance therefore on preparing individual students so that they will be able to gain as much as possible from their early service careers. To guide them in their initial stages they are given the same instructional notes as are issued to the cadets on the full IOT course. The planning, administration and to a large extent the teaching commitment on each course are undertaken by the 2 flight commanders and the squadron commander, whilst specialist subjects such as War Studies, Ground Defence Training, Security, Drill and PE are taken by the respective specialist departments or by visiting lecturers.

Each SERE course begins on a Sunday evening when the new arrivals are met in College Hall Officers' Mess by a member of the DS who briefs them on the following day's course of events. On the Monday morning they are welcomed by the Director of the Department of Initial Officer Training and are then interviewed individually by their respective flight commander. Kitting out follows during which they are issued with 'combat kit' and DMS boots which they will wear with varying degrees of comfort for the first 2 weeks of training. 'Blue' uniforms are not normally ready until the beginning of the third week. Course and individual photographs are taken at the end of the first Monday morning before the academic programme starts in earnest.

In very simple terms the course can be considered in 3 interdependent segments: ProfessionalStudies, Leadership, and Ground Defence Training. Binding the whole together is a network of ancillary subjects and sporting and social events. The culmination of the training programme is an examination in the final week which, besides providing an incentive during the course, also gives the DS a yardstick by which they can validate the instruction they provide. The sedentary lecture day is alleviated whenever possible by periods of drill and PE, during which, to the hitherto undreamed delight of the students, quite high standards of military precision and fitness are achieved. However, despite the attentions of the College Warrant Officer, the standards of drill are unlikely to worry the Queen's Colour Squadron.

In Professional Studies the students receive a basic introduction to Officers' Responsibilities, Duties and Regulations, Customs Etiquette and Social Responsibilities, Signals and Casualty Procedures, Accounts, Supply, Personnel, Welfare, Flight Safety and Air Force Law. Instruction in the conventions of Service Writing is consolidated by the submission of narrative entries in the second and final week of the course during which the students make progressive comments on their training and incidentally provide valuable feedback to the DS. Further consolidation in this area is effected by the office simulator phase which takes place in the final week with all students playing the role of junior officers on a typical RAF station and coping with a variety of day to day problems. The simulator exercises are designed to put into perspective the whole of the professional studies aspect of the course, from welfare interviews to signal writing and Air Force Law. To develop skills and confidence in oral communications the students are given the opportunity to practise briefings and 5 and 10 minute talks in front of their respective flights and the CCTV cameras. This is an experience new to most of them and

SERE draining National Trust land in Derbyshire.



Route discussion

many students are surprised at the marked improvements in their performance by the end of the course. As an indirect result of these talks the DS are becoming experts on anything from home brewing to leprosy. In the Oral Communications briefings the students are given a useful introduction to the leadership phase of the course and it is to this that we turn our attention next.

Following basic lessons in field living and navigation, the Leadership phase commences with instruction in the functional aspect of leadership. This in turn is followed by classroom and airfield exercises in command, management, and leadership as a build up to the camp which takes place over 3 nights from the Friday of the second weekend. Executives selected during the first week take over the organisation and running of the camp under the watchful eye of the DS who plan exercises to give each student the opportunity to gain confidence and experience in leading a team. The exercises, which are varied in length and physical demands according to the strengths or weaknesses of particular courses, are planned for each morning, afternoon and evening, and wherever possible interplay between flights is organised. Exercises last for 2 to 3 hours and cover between 5 and 10 kilometres during which the leader has to cope with a variety of problems designed to put him/her under varying degrees of stress and to bring out different aspects of leadership. The camp is held in one of the Practical Training Areas (either Stanford or The Dukeries) or in conjunction with the National Trust in Derbyshire. In the latter case the course carries out National Trust projects such as fencing or ditching and drainage in lieu of some of the normal leadership exercises. Whilst at the time camp is a challenge for all and a struggle for some, it is almost invariably enjoyed in retrospect.

The third main area of the course, Ground Defence Training, is designed to make students aware of the importance and complexity of modern warfare and, in particular, the problems of casualty handling. All students are given training in the Royal Air Force Ground Defence Policy and practical aspects of Nuclear, Biological and Chemical warfare, culminating in a model station defence exercise. In addition, the combatants spend a day undergoing personal weapon training and instruction on guards and sentries. During this time the non-combatants, who normally comprise the majority, have the opportunity to visit an operational station, which consolidates much of the classroom instruction.

It should perhaps be stressed at this point that the learning environment is not wholly confined to the classroom or field. The students attend, as part of their training, one of the IOT Dining In nights. They are actively encouraged to take full advantage of Mess and sports facilities, and most courses organise some form of sporting or social function during their short time at Cranwell.

The course is rounded off by the students being given the opportunity to present a course critique. This is followed by the final interviews in which flight commanders discuss with individual students their strengths and weaknesses. The course culminates in a graduation ceremony in which a visiting reviewing officer, after a short address, presents course certificates prior to luncheon in the College Hall Officers' Mess. The students then clear from the unit whilst the DS complete course administration and clear the decks for the next intake.

As can be seen, the course is intensive and is designed to cover as many aspects of General Service Training as possible in 4 short weeks. To this end it is made varied and stimulating, but its success can only be measured by the ability of each student to answer favourably the question "Have I sufficient knowledge to be able to go out into the Royal Air Force with confidence in my ability to carry my responsibilities as an officer?" The students leave Cranwell with, if not all the answers, then at least the knowledge of where to find the solutions to the many problems that will tax them during their varied careers in the Royal Air Force.

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March 2007 - The New SERE (2)

AN INTRODUCTION TO SERE

by Officer Cadet James Bowling

The SERE (Specialist Entrant and Re-Entrant) Course at RAFC Cranwell is an 11-week course undertaken by all those who are seeking commissions in the Royal Air Force as professionals or entrants with previous military service.

Professionals are required for a number of specialist support branches by the Royal Air Force, such as Medical, Dental, Nursing, Legal and the Chaplaincy. These branches are spread throughout the operating area of the RAF both at bases in the UK and assisting forces operating overseas.

The SERE Course itself has undergone a number of changes in recent years and is still evolving rapidly. It was originally a 4 week course which covered the essential service knowledge required to become an officer and little else, leading it to become known disparagingly in certain circles as the "tarts and vicars course". It was extended to 8 weeks and within the last 2 years to the current 11 weeks. This change was driven by the rapidly changing nature of modern conflicts particularly in Iraq and Afghanistan, which have found specialist personnel being deployed more frequently into situations where a wider range of military skills are required than were previously taught. As part of a modern flexible Air Force, specialist officers now need to be prepared to undertake a range of duties, leading to an emphasis on being "warfighter first, specialist second".

The current SERE Course therefore operates not as the attendance course which was how some viewed the older shorter courses, but more as a condensed version of the main Initial Officer Training (IOT) Course. Whilst it is necessary to abridge certain elements of the 32-week IOT Course to fit it within the SERE time-table, essentially specialists entrants cover the same areas as all officer cadets entering the RAF. This includes weapons training, First Aid, Chemical Biological Radiological and Nuclear training and field craft designed to give specialists the skills needed to operate effectively in a fast changing theatre where they may not always be able to rely on other units for support.

The structure of the Course also mirrors the main IOT Course with the first 4 weeks approximating the first term of IOT, the second 4 weeks mirror the second term and the last 3 the final term of IOT. Consequently the amount of material covered makes the Course extremely intensive and cadets are required to learn a wide range of new skills in a very short space of time.

Most successful cadets on SERE graduate as Flight Lieutenants on a Short Service Commission of 6 years, but this can vary between branches. On graduation, successful cadets normally go on to complete the Basic Air Warfare Course (BAWC) at Cranwell before being posted to their respective units. Such is the pressure being faced by the RAF at present that many can expect to be deployed soon after graduation and will need to use all of the skills which they have acquired in diverse roles supporting the main air effort. Therefore the new SERE Course is an important part of the training structure of the modern RAF, helping specialists to deal with the changing pressures which they will face as Junior Officers.

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March 2010 - A Sqn SERE Short Courses (3a)

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March 2010 - A Sqn SERE Short Courses (3b)

A Squadron Short Courses

Officer Cadet Wroe, Specialist Entrant and Re-entrant Course, A Squadron

The Specialist Entrant and Re-entrant (SERE) course is the major commissioned element of A Squadron. Each course is 11 weeks in duration and starts during the OACTU leave period. Following the same outline as our main squadron counterparts the frenetic pace leaves no room for error and time is precious. Following arrival and attestation the training focuses on the development of cadets from being highly competent civilian professionals, into capable military individuals. The OACTU Fitness Assessment (OFA) is the first hurdle – held on day one – and failure results in being removed from course and placed on RAD Flight. The cadet will then undertake a period of intense physical training prior to returning to a later course, when their fitness has met the required standard. Officer cadets are in uniform from day two, and the arduous task of getting everything up to the required standard is helped by the careful guidance of the Flight Sergeant - there is no room for the feint hearted! Aided by organisational skills from previous life experiences and employment, we manage the stressful situations with self-discipline and plenty of immoral humour, often provided by the doctors, nurses and padres. By the end of Week 1 the weapon handling test has been passed, we have met the required standards of the OFA, know every inch of the Parade Square and have turned our bedrooms into a special place that glistens everywhere you look – something a mother would be proud of, yet where the Flight Sergeant will always find 'areas for improvement'.

Following introductions to leadership theory and practical lessons, Airpower studies, a smattering of first aid, CBRN, more drill and definitely more Physical Education we undertake a weekend of freedom away from the College to undergo Practical Leadership Training in the Peak District. We discover where our strengths and weaknesses lie, learn to trust each other, and accept that working alongside the staff is not all that bad. Arriving back late on the Saturday, the evening is then spent preparing for the 'Bivvy' night, where more military skills are taught and then put in to practice with gourmet food al fresco and a night under the stars.

The exercise in Week 5 is Exercise Military Aid to the Civil Authorities, often shortened to Exercise MILAID, with scenarios to test the mettle of all. Previous counselling and analytical skills come to the fore in enabling us to show what we are made of. However, the staff members still have the ability to 'help' rational professionals with years of leading medical and community-based teams become nervous amateurs. Long days on the training area cement all the previous teaching and allow for last minute alterations to varying styles that will all come to fruition in no more than two weeks at Exercise DECISIVE EDGE (DE). Harsh words aimed right between the eyes leave no room for mistakes and this is just from our peers during the post-lead review. This peer feedback is an essential element of the Course following on from the trust exercises; the criticism is constructive but often a difficult pill to swallow. As professionals we accept that the feedback is not personal and look at the perceptions of others to try and prevent reoccurrences in the all-encompassing leadership assessment that is DE.

A week of military field skills allows individuals the opportunity to practice and hone their Force Protection skills prior to deployment on Ex DE. Before all of this happens there is the one and only Ultimate Challenge – this means physical exertion, mental awareness and the guile to beat the main squadron! A whole morning of heavy battle PT culminates in the finishing run around the Orange showing how far we have come and how far we can push ourselves when we need to.

Ex DE is the main leadership exercise that tests individuals in all that they have learnt on course to date. Punishing days consisting of long shifts offer an insight in to the roles and responsibilities on an austere Deployed Operating Base (DOB). Success on our tested leads allows SERE cadets to be 'fast tracked' to Term Three and the Combined Operations Centre (COC); this is the heart of where the operation is run from. Undertaking the roles of an SO2 or SO3 we have our first insight into staff appointments, where our actions affect the troops on the ground and how the leads of others are played out. Liaisons with Host Nation forces and on-the-spot decisions show how the accumulation of training has enabled us as individuals to become military focussed, making the most of our military training as well as the abilities accumulated in our previous lives.

Post-Ex DE, the final two weeks focus on Graduation starting on the Tuesday of Week 9 when the results of the review board are released indicating whether we have passed or are being re-coursed for further training. The popping of champagne corks delivers the confirmation for Graduation and the start of the drill phase in preparation for Graduation Parade. A formal Dining-In night sees us dined in to the RAF – this provides an opportunity to announce prize winners. For SERE the awards are the Daedalus and Chapman trophies.

On Graduation Day emotions run high as the culmination of all the hard work, training and effort from both students and staff comes to fruition. Standing on the Parade Ground, impeccably dressed we all feel the hairs raise on the back of our necks several times over, whether it be the flypast, first salute from the Flight Sergeants or the cheer as the doors close behind you; we have made it through Initial Officer Training and are ever closer to going on to do what we were trained to do out of uniform. The final and most poignant moment of the course is the Graduation Ball, and is highlighted at midnight when, gathered in the Rotunda of College Hall, the names of the Graduating Officers are read from the scroll. Everyone cheering everyone!

Learning a range of military skills; improvements in dress, bearing and deportment; greater self-control, confidence and conduct; improved teamwork, leadership and management – all are skills that we have developed, getting us ready for the next step. We remain professionals and are now, in addition, military professionals. The condensed nature of the Course has made us realise that we have achieved more than we believed we were capable of. Learning quickly we overcame the problems and enjoyed working with our main squadron counterparts proving we were just as capable and on occasions going beyond 'just capable' to dispel any myths that we were inadequate because our course was shorter. Although shorter, we have covered the important elements in our military training. That said we know we still have so much to learn, yet are confident in our abilities to deal with the experiences we are yet to undertake.

We have now taken the first steps in a long journey of development and learning from the foundations and history of the RAF to its future as equals to our main squadron counterparts striding forward together as professionals.

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May 2013 - SERE Training (4)

Specialist Entrant And Re-Entrant Officer Training

Officer Cadet C Bullock, SERE Course, Officer & Aircrew Cadet Training Unit

The vast majority of Royal Air Force Officers have earned their commission following completion of Initial Officer Training (IOT), a complete and arduous introduction to the Service way of life where they developed an understanding of their responsibilities of being awarded that commission. However, this is not the case for all Officers. By virtue of professional qualification or previous service, a number of students undertake their officer training via the shorter Specialist Entrant and Re-Entrant (SERE) course, where there is little luxury of time to develop the skills and attributes required of them. This article aims to demonstrate how the SERE course has evolved in order to help them achieve these standards and produce high quality officers, who can stand proud with the other graduating cadets on the College Hall Parade Square.

The SERE course caters for those joining the Medical, Dental, Nursing, Legal and Chaplains branches, as well as for re-entrant officers of all branches seeking to rejoin the Service. Recent courses have included cadets from an ever broader background, including Physiotherapists and Radiographers moving into the Medical Support role. Some of the cadets already have the occasionally confusing privilege of having been awarded their commission prior to commencing military training (although the SERE Course 'confirms' their commission). The SERE course has taken place at RAF College Cranwell for just over 33 years. Prior to this, training had been conducted at the Officer Cadet Training Units at RAF Jurby on the Isle of Man then RAF Feltwell in Norfolk, where it was called the Professionally Qualified and Re-Entrant (PQ&RE) course, before later moving to RAF Henlow. In January 1980, the SERE course settled here at RAFC Cranwell, at what was then the Department of Initial Officer Training (DIOT). Initially just 4 weeks long, the shorter duration course (relative to IOT) earned SERE a tongue in cheek reputation of being a 'vicars & tarts' attendance course. When known as PQ&RE, the course had a nickname of 'Pick one Quick and Retire Early.' Now an 11-week course, SERE has earned itself a far higher reputation by condensing the essential elements of IOT in a rollercoaster ride of Professional Studies, Leadership and Force Protection (FP) training, with each week bringing its own varied challenges.

SERE cadets putting paid to the image of 'vicars & tarts' as they march a heavy stretcher through the snow during 'Battle PT'.

Each SERE course begins with arrival to College Hall Officers' Mess on a Sunday afternoon, one week earlier than the start of the new IOT main Squadron intake. This allows for an induction week, before running alongside the 10-week IOT term. Following the unload of fully packed boxes, ironing boards and far too many clothes, the cadets have an initial briefing with the Directing Staff (DS) followed by Attestation by the Squadron OC, where cadets are formally sworn into the RAF. The subsequent couple of weeks consist of rapid militarisation. Because of the professional background and extra 'life experience' (and in some cases extra grey hairs!) of the Officer Cadets that join SERE, some find adapting to this phase easier for some than others. From learning terms of address and receiving lessons in drill, to ironing perfection and the daily dispelling of dust, these few weeks are a steep learning curve. Effective and almost instantaneous teamwork is required in order to achieve the standards of uniformity, as well as the humility to accept that even as a highly skilled professional you may not be very good at 'bulling' your shoes. During this time the cadets also start their classroom based studies, which include Defence Writing, Essential Service Knowledge (ESK) and Air Power Studies, with PEd lessons breaking up the day and allowing the cadets out for some fresh air. The ESK curriculum also extends out of the classroom, with a formal 'Meet-and-Greet' night, where cadets learn hosting skills. Leadership is also introduced at this stage, with lecture based theory as well as developing the 'SMEAC' style of briefing in a day of hangar based leadership exercises. The cadets then attend Force Development Training Centre Crickhowell for 3 days of adventurous training with the intent of pushing cadets out of their comfort zones. The Regiment Training Flight also delivers instruction on FP. This involves developing military bearing through patrolling skills, search techniques and other field-based skills, and all cadets also complete weapon-handling training. This is a change from previous thinking, where it was considered that 'non-combatant' SERE cadets did not require these skills. This field training is brought together with the first field Exercise of the course, Ex FIRST STEP, which is an overnight stay in a 'bivvy' at Beckingham, run with the Term 1 IOT cadets.

From the start of Week 4, the SERE cadet is involved in back-to-back Exercises, resulting in almost as much time spent in the field as the full IOT course. This starts with Ex ACTIVE EDGE, which is a 3-night Exercise back at the Beckingham Training Area. This is the first time the cadets have to combine their FP and leadership training, taking it in turns to lead realistic scenarios. Having had the opportunity to consolidate their weapon-handling skills with a day at the 25m live-firing range, the cadets are able to simulate enemy contacts within the Exercise, considered to be one of the highlights. The following week is Ex MILAID, where the SERE course deploys to Stanford Training Area (STANTA) in which they follow a complex scenario, assisting civilian authorities with a search for missing children. The Exercise covers how to interact with the Police and the media, as well as furthering leadership development.

Week 6 brings the SERE cadet back to the classroom for some theory consolidation as well as Chemical Biological Radiological and Nuclear (CBRN) training, which is an experience well remembered, if not enjoyed. There is also the opportunity to demonstrate teamwork and competitive spirit with 'Ultimate Challenge,' a morning of gruelling physical competitions run by the PEd staff in which cadets from IOT Term 3, SERE and also the Non-Commissioned Aircrew (NCA) course, compete in flights for the coveted 'Golden Boot' trophy. After this physically demanding day, the cadets get their rewards by attending a Training Dining-In night at the College Hall Officers' Mess, for many their first formal Mess function.

SERE cadets successfully apprehend a suspect individual during Ex MIL-AID.

Weeks 7 and 8 are the pinnacle of the SERE course, where cadets deploy on Ex DECISIVE EDGE for a 2-week exercise with IOT Term 3. Whereas the Term 3 cadets have visited RAF Syerston, or for Exercise purposes the country of 'Moltovia,' during Term 2, this is the first and only time that the SERE cadets participate in this Exercise. Consequently, they have to draw on everything they have learned so far in order to demonstrate good leadership and officer qualities. Each cadet performs a 6-hour 'lead' in one of a variety of roles including Adjutant, Guard Commander, Combined Incident Team Commander and Patrol Commander. These are assessed formally, and the cadets have to perform well in order to be recommended for graduation. It is a physically and mentally demanding period, stretching and testing the cadets in all the areas required of an officer.

On return from Ex DECISIVE EDGE, there is the nail-biting wait until the start of the following week, when each cadet receives an interview with the SERE Flight Commander. This is when the cadet will find out whether they are recommended to graduate, and as such the following evening has adopted the name 'Champagne Tuesday', replacing the rather more pessimistic previous name of 'Black Monday'! From this point on, all graduating officers from both SERE and IOT Term 3 spend the next 2 weeks practicing their drill ready for the Graduation Parade, under the ever-watchful eye of the College Warrant Officer. Being the shorter course, the SERE cadets have had far fewer drill lessons than their Term 3 colleagues, so with the added challenge of carrying a sword, the pressure is on to quickly reach the standard. Despite this, there are few in the audience on Graduation Day that would be able to tell the difference between a SERE and an IOT cadet, apart from perhaps the female Nursing Officers in their 'pirate hats'! The SERE course, thanks to the dedication and enthusiasm from its DS, is an intensive and wholly encompassing 11 weeks that fulfils its objective to polish its cadets into competent officers, who understand and appreciate the responsibilities of the Queen's Commission. It is a feat certainly worth toasting come the Graduation Dinner!

The Deployed Operating Base defences are put in place during Ex DECISIVE EDGE.

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1983-1984 - Air Navigation (1a)

THE ARIES IV REPLICA CANBERRA

This article has been prepared by Squadron Leader D A Cunliffe, Department of Air Warfare.

In 1944, the Empire Air Navigation School (EANS) at RAF Shawbury took delivery of a modified Lancaster for use in the development of long range and high latitude navigation techniques. The aircraft, which had its turrets removed and extra tankage and streamlined nose and tail cones fitted, was named Aries. In 1944, Aries became the first RAF aircraft to circumnavigate the globe, taking a total of 202 flying hours. Two days after VE Day, Aries became the first RAF aircraft to fly to the North Geographic and Magnetic Poles.

Several other long range flights were carried out by Aries, but, in January 1947, Aries was replaced by a similarly modified Lincoln, named Aries II, which set up further records of her own, including a London-Capetown record of 26 hrs 57 mins. In her turn, Aries II was replaced by another Lincoln, Aries III, which set a London-Khartoum record of 14 hrs 23 mins during a round-the-world flight in October 1950.

Meanwhile, in July 1949 the Royal Air Force Flying College was formed at Manby, and the overseas and liaison section of EANS was transferred to the new unit, together with Aries III. By 1952, Lincolns were being supplemented in RAF service by Canberras, and it was felt that Aries III was becoming outdated. Accordingly, in February 1953, Canberra B2 WH 699 was delivered to the RAFFC and was named Aries IV. This aircraft was fitted with improved radio equipment, periscopic sextant and an additional bomb bay fuel tank.

To celebrate the 50th anniversary of man-powered flight, the RAFFC flew Aries IV to Capetown and back in December 1953, setting world records by flying London-Capetown in 12 hrs 21 mins and Capetown-London in 13 hrs 16 mins, including 2 refuelling stops in each direction. In October 1954, during a flight from Bardufoss to Bodo, Aries became the first RAF jet aircraft to reach the North Pole. In June 1955, Aries IV carried out a transpolar flight to Alaska, and on the return flight established an Ottawa-London world record of 6 hrs 42 mins.

The final aircraft in the Aries series, a Canberra PR7, arrived at Manby in June 1955 and was named Aries V. This aircraft flew non-stop from Tokyo to London over the North Pole, a distance of 5942 miles, in 17 hrs 42 mins in May 1957 to set yet another world record.

In due course, the RAFFC was retitled the Royal Air Force College of Air Warfare (RAF CAW) and, in 1974, the staff of RAFCAW moved to Cranwell to form the new Department of Air Warfare (DAW) within the Royal Air Force College. DAW has several mementoes of the Aries flights, but for many years it has been felt that the aircraft and the crews which flew them should have a more impressive memorial. With the gradual reduction in the number of Canberras in service, it became possible to obtain a life expired Canberra for display at Cranwell, and it was decided to repaint the aircraft to represent Aries IV.

In October 1982, Canberra B2(T) WJ637 was flown to Cranwell from Wyton on its last flight. It was first parked outside Aircraft Hall for 4 months while the Aircraft Engineering Group of DSGT stripped the aircraft of reuseable items such as engines and ejection seats. Meanwhile DOE staff prepared concrete mountings on the grass outside Trenchard Hall on which the aircraft could eventually be positioned.

One Saturday morning in February 1983, the aircraft was moved to its new position outside Trenchard Hall by an enthusiastic team of officer cadets from DIOT, under the watchful supervision of DSGT engineers. Rain had fallen overnight and the ground was soggy. The original plan to tow the aircraft up the grassy slope between the airfield perimeter road and Trenchard Hall had to be abandoned when the tractor, running on pierced steel planking laid over the grass, proved better able to propel the planking rearward than the aircraft forward. Eventually, the aircraft was towed backwards with 2 wheels on the adjacent road and one on planking laid on the grass. Two trees were surreptitiously felled so that the aircraft could regain the original route across the lawns in front of Trenchard Hall.

The lawns proved less of a problem than the slope, as the ground was level, but much of the planking buckled under the aircraft's weight, while the aircraft showed an alarming propensity to slide sideways off the planking when being towed. The DIOT team spent an energetic few hours constructing ever wider tracks of planking ahead of the aircraft from that which was revealed ever more slowly from behind. After 3 attempts at lining the aircraft up with its mounting blocks, the aircraft lurched into place, the nosewheel leaving the ground for a few horrifying seconds.

Lancaster "Aries" touching down at RAF Shawbury in May 1945 at the end of its non-stop record-breaking flight from Whitehorse (Yukon) via the North Magnetic Pole. The captain was Wg Cdr (later Air Vice-Marshal) D C Kinley DFC AFC.
Photo Acknowledgement: Gp Capt FC Richardson RAF Retd.

WJ637, repainted to represent WH699, AriesIV.

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1983-1984 - Air Navigation (1b)

There was a lull in apparent progress while negotations continued towards having the aircraft repainted. The aircraft paint was in poor condition, but its priority for professional attention was obviously low. To minimise cost and yet complete the job quickly, it was decided that self-help would be used for the labour-intensive surface preparation phase. Accordingly DAW staff spent several summer evenings and a weekend crawling over the aircraft carrying buckets of water and wet and dry paper. Tools and equipment were borrowed from the Fire Sections, the Paint Shop, the Rectification Flight and RAF Waddington, but most of the degreasing and rubbing down was done by hand. The Canberra is not a large aircraft until you approach it with a hand sanding block, when it takes on the dimensions of a football pitch.

We had obtained permission to repaint the aircraft as Aries IV and had found details of its original colour scheme, but the main colour, PRU blue, was no longer manufactured and stocks had been exhausted years ago. The only aircraft still wearing this colour was a Spitfire of the Battle of Britain Memorial Flight at RAF Coningsby, the paint for which had been mixed from memory by an aged civilian at RAF Kemble. Samples of this were taken and new stock mixed from existing colours. With the help of HQ RAF Support Command, a team of painters and finishers was assembled from RAF St Athan, Abingdon, Finningley and Cranwell. During a fine spell in September, the aircraft was painted. Mechanical Engineering Flight provided an expert signwriter, who reproduced the details of Aries's records as they had been painted on the nose of the original aircraft. A commemorative plaque was engraved to be mounted by the aircraft, and a curtained enclosure was constructed so the plaque could be ceremonially unveiled.

On 21 October 1983, the day of the annual Aries Association Symposium, the plaque was unveiled by Air Chief Marshal Sir David Evans, President of the Royal Air Force Air Warfare and Flying Colleges' Association, and Air Vice Marshal J B Duxbury, President of the Aries Association, in the presence of the AOC and Commandant. Several crew members of the Aries aircraft were also present including Air Vice-Marshal D C McKinley, captain of Aries I on her round the world and polar flights; Air Vice-Marshal D Bower, who navigated Aries IV on her record Capetown-London flight; Mr F R Wood who, with AVM Bower, navigated Aries IV to the North Pole; and Air Marshal Sir Charles Ness who ejected from Aries IV when her controls ran away on her last flight from Manby in November 1959.

WJ637, now repainted as WH699, stands as a reminder to the many visitors to the Royal Air Force College of the pioneering days of long range navigation in the Royal Air Force. Every Department within the College, the FTS Cranwell, and many other RAF stations contributed to the reconstruction. The full history of the Aries flights has yet to be written. Perhaps the Aries IV replica may inspire one.

Air Chief Marshal Sir David Evans and Air Vice-Marshal J B Duxbury examine the aircraft after having unveiled the plaque.

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1984-1985 - Air Navigation (2a)

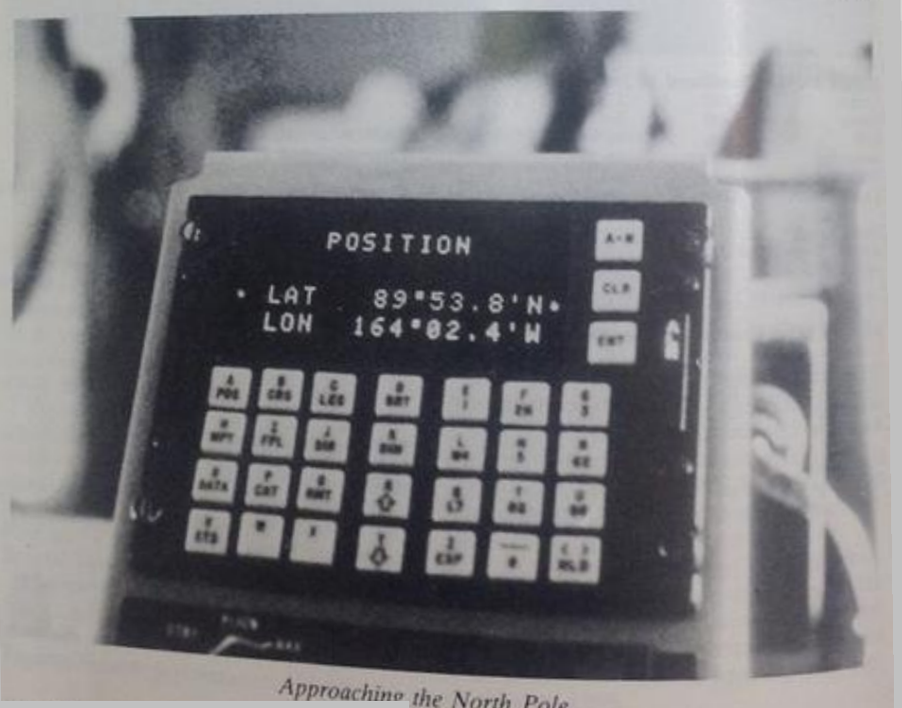
ARIES 84

This article was prepared by Squadron Leader D F Cook, Department of Air Warfare.

Ever since the advent of non-visual navigation of aircraft the RAF has been keen to evaluate the performance of new aids to blind navigation. During World War 2, under the auspices of the nostalgically named Empire Air Navigation School, a series of long-range flights was undertaken in a modified Lincoln aircraft which was christened 'Aries'. This aircraft became the ancestor of a line of Aries aircraft in which similar flights were flown throughout the late 40's and 50's and it is from them that the name for Exercise Aries is derived. The so-called Aries flights are now undertaken by staff and students of the General Duties Aerosystems Course (GD ASC), which is run by the Department of Air Warfare (DAW), and they are used to introduce ASC students to the operation and evaluation of modern avionics systems during long range flights.

Exercise Aries 84 took place during the period 6-10 August 1984 using a specially modified VC 10 aircraft. The aircraft was operated by crews of No 10 Sqn and two series of flights were flown. The first flight staged to Goose Bay in Labrador, via Iceland, overflying the North Geographic Pole and returning to Brize Norton after an overnight stop. The second flight staged to Winnipeg, via Norway, and traversed both the North Geographic and North Magnetic Poles, returning to Brize Norton on the following day. Prior to the flights a team from DAW and the Department of Specialist Ground Training, with the aid of Brize Norton engineering personnel and representatives of Industry, fitted the systems to be carried into the passenger compartment of the VC 10. This called for new cabling and power supply packs to be installed as well as re-routing aerial outputs and, in one case, fitting a new external aerial. These fairly major modifications went surprisingly smoothly and all the equipment was ready and working within the space of four days. This was no mean achievement when you consider that we had managed to beg, borrow or steal from both industrial and Service sources no fewer than six Inertial Navigation Systems, an Omega receiver, a Tactical Air Navigation System, a Twin Gyro Platform, an Altitude and Heading Reference System, two Global Positioning System (GPS)/Navstar receivers and a variety of desk-top computers and printers.

The equipment worked excellently throughout the Exercise, reflecting the increasing reliability of modern avionic systems, although one firm's representative (it would be churlish to name names) largely rebuilt one of the inertial systems on the floor of the aircraft during flight. During each flight positional and heading data was collected every ten minutes and compared to an in-flight datum equipment. For more accurate and detailed analysis of the data it was compared on the ground back at Cranwell with a computer-derived datum position. Just as important as the gathering of raw data was the fact that the students and officers from various departments of the Ministry of Defence were able to question the representatives of firms who accompanied each equipment. The routes flown were deliberately chosen to push the various systems to their limits and to reveal their capabilities in an unfriendly environment. For example, gyro systems and some inertial systems have great difficulty in coping with high latitudes and it is always interesting to see how they perform. Even so-called worldwide systems such as the Omega can have great difficulties when operating in polar regions because of attenuation which occurs when the signal traverses large areas of ice, and there is certainly no shortage of ice at the North Pole. Satellite systems, such as the GPS/Navstar which we carried, are still in the early stages of their development but should eventually give true global coverage with accuracies in



Approaching the North Pole.

'and there is certainly no shortage of ice at the North Pole'

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1984-1985 - Air Navigation (2b)

the region of 16 metres. On the few occasions that sufficient satellites were available for navigation the GPS/Navstar proved to be very, very accurate.

Of course Aries 84 was not just hard work and black boxes and during our nightstops we received some excellent support and hospitality. The RAF element at Goose Bay seemed particularly pleased to meet a group capable of intelligent conversation, normally meeting for the most part only visiting Tornado crews, and they induced us to inbibe and barbequed at least two cows (steers in the vernacular, I suppose) in our honour. Winnipeg was also first-rate, despite the fact that the exotic dancer in our hotel had done her last performance for the week on the previous evening.

It is interesting to note that in 1945 'Aries 1' became the first RAF aircraft to navigate both the North Geographic Pole and the North Magnetic Pole. On their return to the UK the crew received no fewer than three AFC's, two AFM's and seven Queen's Commendations for Valuable Services in the Air; when we repeated the trip all we got on return to Brize Norton was an inordinately grumpy Customs official who demanded VAT on the equipment which we were 'importing' and initially refused entry to one of the company representatives. Next year we will try to avoid carrying a Japanese-American working for a Canadian firm, based in France and operating out of UK. Either that or spike the Customs man.

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March 1997 - Navigator Training (3)

MEMORANDUM OF UNDERSTANDING BETWEEN THE DIRECTORATE OF RECRUITING, SELECTION AND INITIAL OFFICER TRAINING WITH THE GUILD OF AIR PILOTS AND AIR NAVIGATORS

Captain Clive Elton, Past Master of GAPAN and Air Commodore Cynthia Fowler ADC RAF pictured at the ceremony

Learning to fly is an expensive business so an early indication of potential is much sought after. Since 1995, the Guild of Air Pilots and Air Navigators (GAPAN) have run a scheme whereby those considering paying for their own flying training can, before committing themselves, undertake the much respected RAF Pilot Aptitude Tests at The Officer and Aircrew Selection Centre. Not surprisingly, the scheme has attracted interest from various aviation companies faced with the cost of training their own pilots, so it has been decided to extend the facility to assist with civil pilot selection in general. At a short ceremony at the RAF College Cranwell on 30 January 1997, a Memorandum of Understanding was signed by Air Commodore Cynthia Fowler, Director of Recruiting, Selection and Initial Officer Training for the RAF, and Captain Clive Elton, Past Master of GAPAN, initiating the extension of the scheme.

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2010 - Initial WSO Training (4a)

Royal Air Force Initial Weapon System Officer Training

Flight Lieutenant Robinson, Flight Commander 16 (Reserve) Squadron

"Man is not lost ...." [1]

So we still need WSOs, then?

The trend towards single-seat or two-pilot air platforms has been remorseless over the last decade or so, but there are still many vital RAF operational aircraft that count a weapon system officer (navigator, in old money) as part of the crew: for example the E-3D, C-130K and, importantly, the Tornado GR4 and the brand new Nimrod MRA4. So each year some 16 bright young budding 'WSO' students enter the flying training system after graduating from the RAF College. Their first task is to navigate to B Flight, 55 (Reserve) Squadron, for their initial navigation training on the mighty Grob 115E Tutor.

B Flight is located with the other Cranwell Tutor units at the No 1 Elementary Flying Training School site, affectionately known as 'RAF Rauceby Lane'. B Flight shares accommodation with 16 (R) Squadron, one of the RAF's Tutor pilot training outfits, so ab-initio pilots and WSOs start their training together, honing from the outset the 'bantering' skills they'll need when crewed together on the Front Line. The Flight's staff consists of a squadron leader Flight Commander, and three flight lieutenant 'ANIs' – Air Navigation Instructors. These are all ex-fast jet WSOs, as the course standards assume student WSOs are destined for the GR4 Force.

'Hot to trot' in the mighty Grob 115E Tutor.

1. 'Man is Not Lost – The Log of a Pioneer Air Navigator 1933-46', by Gp Capt 'Dickie' Richardson; quoted from the Gospel of St John, Chapter 14 verse 6.

Let's get airborne!

Not so fast! The 4½-month course begins with Exercise MOORTREK, a 2-week survival exercise which includes five days in the Field practising cross-country navigation, Search and Rescue techniques and living off the land: self-catering is the thing, with chicken, rabbit and squirrel provided 'in the feather'. Four days at the Aviation Medicine Wing, RAF Henlow follows, for flying kit sizing and an introduction to aviation physiology. Then Ground School proper: Five weeks of aerodynamics, principles of flight, meteorology, avionics, flight operations etc and, of great importance, maths and mental arithmetic - without calculators!

Arriving at Rauceby Lane for the 3-month flying phase, the students meet their three flying instructors. These are Qualified Pilot Navigation Instructors - QPNIs. They're experienced pilots: the Tutor has only two seats so there's no room for an ANI. The QPNIs are badged 16 (R) Squadron, and also fly as Qualified Flying Instructors on the pilot training side of the Squadron. The first training sorties take place after a couple of days' lectures and briefs, and when the flying starts, it's fast and furious. Trips 1 and 2 teach students the effects of controls and basic aircraft handling; how to do the Checks, use the radios, depart from and recover back to Cranwell, and fix the aircraft's position, both visually by map-reading, and when in/above cloud through the navigation avionics and Air Traffic radar services. Oh, they're also taught how to look out, find other aircraft and report their position quickly and accurately: *"There are two sorts of aircraft; fighters and targets – which sort do you want to be?"* Trip 3 includes stalling and spinning, after which the student knows how to monitor the pilot's flying, recognise potentially dangerous situations, and give appropriate warnings and advice on how to recover the aircraft safely.

Seems more challenging than I thought

You ain't seen nothing yet! Trip 4 tests the students' knowledge of Checks and radio calls and procedures; without a sound grounding by this stage, they will not be able to keep up with the increasing workload of the following sorties. It's hard work: it's believed that ab-initio students' IQ drops by 50% when they don their 'bone-domes', and falls a further 50% when they press the radio transmit button. They're also taught emergency handling on Trip 4. That said, the main aim of the sortie is an introduction to basic visual en-route navigation techniques.

The 'Office'.

A digression: to get from A to B by air seems simple: measure the bearing and distance from A to B, add the Magnetic Variation to the bearing to produce a 'Track' and divide the distance by the speed to produce a 'Time'. Then fly to A, turn onto the 'Track', start the stopwatch, and after the 'Time' you're at your destination. Simple? Not! Wind pushes you off track and changes your ground speed; unless you correct for it you'll get lost. And the wind is rarely as forecast, so you need to use a 'Fix' to monitor your progress, correct your heading and revise your ETA (Estimated Time of Arrival). Moreover, you have to work ahead, as when you get overhead a Fix, or turning point, you can't see it because it's underneath you. Trip 4 demonstrates these points, and teaches a simple (!) set of procedures to get you from A to B in good order, using those mental arithmetic skills for airborne estimations and revisions of headings and ETAs. Ah, the glories of the 1-in-60 Rule and the Rule of 6ths (it's all about Sines) but that's not important right now!

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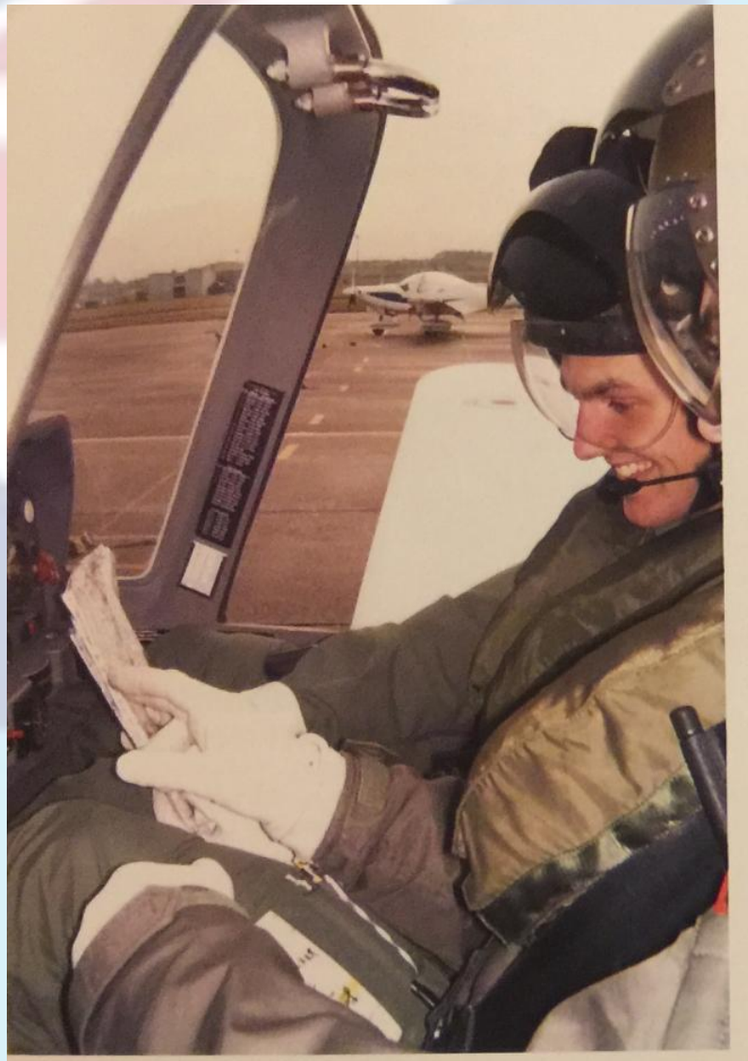
2010 - Initial WSO Training (4b)



"We're there. Probably ..."

Got that? What's next?

Now we're into proper navigation routes, flown at 500ft 'minimum separation distance', ie above the ground or obstacles thereon. Initially the fixes and turning points are set, but soon the students are choosing their own routes, based on the knowledge they've developed about what stands out clearly on the ground. They are also taught to collate the pre-flight data on NOTAMS, weather, diversions etc, calculate fuel minima, and carry out the sortie brief. Airborne (on time, naturally) they learn the 'commentary': a continuous briefing of terrain and safety factors such as pylons, airfields, Controlled Air Space and industrial sites. They look out

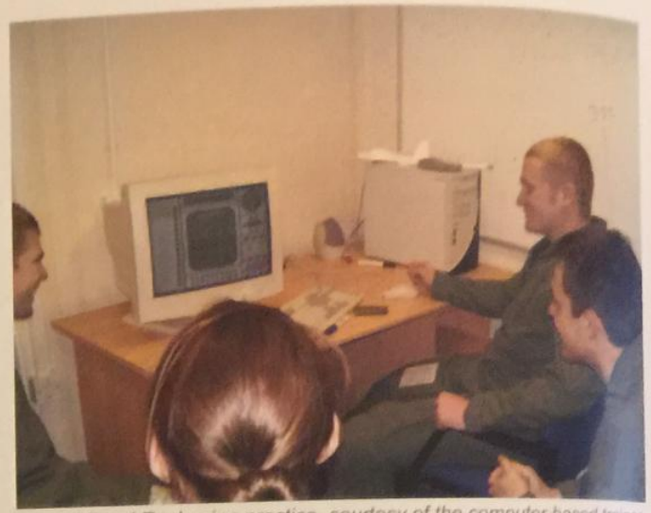
"Fix is road through lake; right one o'clock, range one. We're ¼ mile left of track. Pilot, fly to Fix."

for bad weather and obstructions as well as other aircraft, and they call both military and civil airfields as they transit close by. Their Airmanship and capacity develops rapidly. Sortie 7 introduces the Instrument Landing System and the WSO's responsibilities during a bad-weather radar recovery to Base.

Sortie 8 involves a practice diversion to RAF Church Fenton and, without stopping, another navigation route ('navex') back to Cranwell. Sortie 9 does the same thing to Marham, where the student should glimpse his/her ultimate 'office' – the Tornado GR4. Trip 10 goes north, to Leeming usually; landing, re-planning and returning to Cranwell on Trip 11: the routes are chosen over the high ground of the North York Moors and the Pennines to introduce the students to the particular techniques of operating in 'mountainous' terrain. The learning curve is exponential.

At least we can relax on the ground

You're joking! Meanwhile, ground studies proceed in parallel. There are pre-phase briefs and full use is made of a simple computer-based procedures trainer. Students take turns to deliver the Squadron's daily Met and Ops Brief, learning how to interpret weather data and present it to a critical audience. Then there's Aircraft Recognition; budding WSOs are introduced to a comprehensive syllabus of allied and potentially hostile military aircraft, with the daily slide quiz becoming increasingly difficult as the course progresses. There's some opportunity for sport,



Mental Dead Reckoning practice, courtesy of the computer-based trainer.

but flying takes priority; a spell of enforced grounding due to bad weather will see an enthusiastic use of the Gym, and/or planning the post-course Advanced Personal Development Leadership Training expedition. Budget constraints usually result in the APDLT's location being slightly less 'overseas' than first conceived, but it's valued and enjoyable nonetheless.

Go back to the flying

OK. More classroom work prior to Trip 12, the first of three medium-low navexes. By fixing with VOR/DME, the students learn to navigate a medium-level route at around 6-8,000ft, passing through civilian Controlled Air Space under a Radar Service and often in cloud, after which they descend to 500ft above ground and complete a low-level route, with the sortie lasting around 1hr 45mins. Trip 14 is the Final Nav Test, involving a medium-level leg to enter low-level at Diss in Suffolk, and return passing close to Norwich, East Dereham, Swaffam, Peterborough and Bottesford. This is a demanding sortie, but student performances are most impressive, particularly bearing in mind that the syllabus is only 14 sorties, amounting to just 18 flying hours.

Finished. What next?

Next stop for our budding WSOs is 76 (Reserve) Squadron at Linton-on-Ouse, where they fly the Tucano on a mix of medium and low navexes, including targetting, and at speeds nearly double

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2010 - Initial WSO Training (4c)

"Man is not lost ..."

the Tutor's modest 120 knots. They're streamed after Linton to GR4 (the majority) or Nimrod (a few). Then it's back to Cranwell to learn, inter alia, the use of airborne radar in the Dominie, which is fitted with a nav/attack system that emulates the GR4's: the covetted flying brevet is awarded after this phase. Thereafter the Nimrod WSOs go to the OCU at Kinloss; the GR4 folk shuttle back up the A1 to Leeming for a spell on 100 Squadron's Hawks, for an introduction to high performance flight, formation tactics and air-air combat. Our fast-jet WSOs finally arrive at the GR4 Operational Conversion Unit at Lossiemouth some 2 years and 165 flying hours after starting at Rauceby Lane. Six months and 60 hours at the OCU sees them graduate to their first squadron.

Changes are afoot. The Military Flying Training System initiative is considering alternative training models. Meanwhile, we ANIs and QPNIs of RAF Rauceby Lane will continue to launch young men and women on their WSO careers with enthusiasm, dedication, humour, and much job satisfaction. Our unofficial motto goes on: *"Man is not lost ..."*

The Goal: a Tornado GR4 of XV (R) Squadron – the GR4 Operational Conversion Unit at RAF Lossiemouth.

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1983-1984 - Regiment Training

Regiment Training Squadron Lyke Wake Walk

This article has been prepared by Flight Lieutenant M Shewry, Department of the Initial Officer Training.

Do you remember the July heatwave of 1983? The Regiment Training Squadron (RTS) certainly do. That was the time when they chose to take on the 42 miles of North Yorkshire Moors at their highest and widest point, which make up the Lyke Wake Walk.

RTS is part of the Department of Initial Officer Training. It consists of 3 officers, 8 SNCOs and 5 other ranks, and is currently commanded by Sqn Ldr Charles Hyde, who is the Senior Regiment Instructor. RTS trains officer cadets in all ground defence subjects, including minor tactics to prepare them for leadership exercises, during the cadets' 18 week course at the College. Being keen, "outdoor" types, the RTS staff have also taken part in many competitions, detachments and adventurous training exercises in recent years. These have included the 1982 Cambrian March Patrol Competition, the Volent Rodeo combat competition in America, and more recently the British Army Roadmaster rally competition on Salisbury Plain.

Many of the staff were no strangers to the Lyke Wake Walk, but most were willing to give it another "go", despite painful memories of previous experience.

Accordingly, at the stroke of midnight one cool night in July, Osmotherley village saw 9 intrepid walkers set off on the first leg down the steep hill into the N Yorks mist. The party quickly split into 2 groups, both of which must still have been asleep, for they both got lost in the thick fog and met each other going in opposite directions. It was a sharp lesson in paying attention, and with 40 miles still to go, the extra mile was not appreciated! It did not happen again.

After 5 hours, with 7 miles complete and only 35 miles to go, the group met their support party at the first (official)stop for hot coffee. Sgt Seal, in charge of support, was misguided enough to forget the milk. This allowed most of the group to direct their complaints towards him – as opposed to their real tormentor, which was the N Yorks hills.After 2 more hours of walking the first real landmark was reached, as the team reached Blakey Howe. This is significant in that the "Lion Inn" sits atop the ridge. Unfortunately, at 0700 hours all they were prepared to serve was water. Nevertheless, breakfast disappeared remarkably swiftly.

After 30 miles the team had suffered a few casualties as a combination of blisters and a burning sun had taken their toll. By 1630 hours the intrepid finishers: Sqn Ldr Hyde, Flt Lt Shewry, WO Robertson, and SACs Berkeley, Evans and Swallow, collapsed into a well earned rest.

The Lyke Wake Walk proves an unforgettable experience for all who undertake it. For those who drop out, there is a challenge to "have another go" when their nerve returns. For those who do finish the walk, and 6 out of 9 from RTS did make it, there is a great deal of satisfaction. For all, there remains the pleasure of crossing this open, desolate, but utterly fascinating and beautiful, part of Britain. It is an experience which should not be missed.

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1983-1984 - UAS News (1)

Land And Water Based Activities Within The UAS World

The general aims of the UASs are well known but what is not generally known is the variety of non-RAF activities that members indulge in, either individually or as groups. Activities have included sponsored walks, work for the physically, mentally and socially handicapped, participation in the current craze of half and full marathons and several national and international competitions. All these activities are character-building and many require careful planning, fitness and determination. They are thus a valuable adjunct to the formal training that is provided by the UASs. Such activities of 1983 have been: representation in the Ten Tors Competition, the Nijmegen International marches, the Devizes to Westminster Canoe Race, and participation in the Joint Service Expedition to Norway (NORPED). In all these activities the participants gained greatly from their entry and in the first 3 events emerged with official recognition.

TEN TORS COMPETITION

The Ten Tors Competition, which took place on 14-15 May, attracts members from many youth organizations. This year there were about 2,400 participants in teams of 6-8 people. Entry is not automatic and the teams that are allowed to enter have proved their worth beforehand. The aim of the competition is successfully to navigate the 10 Tors of Dartmoor which, without error, requires walking 55 miles over very rough terrain. The teams have to carry all their requirements and camp out overnight. Our successful team this year came from Southampton who not only completed the course but completed it before the deadline of 1700 hours on 15 May and were awarded medals and team certificates.

THE NIJMEGEN INTERNATIONAL MARCHES

The Nijmegen Marches take place in mid-July and attract teams of 11 or 12 people from many countries. The aim is described on page 47. This year Yorkshire and Birmingham UASs entered teams and one member from London UAS marched for the RAF Bruggen team. Throughout much of the competition, the Yorkshire and Birmingham representatives marched as one team. All were 100% successful and were awarded team medals. Yorkshire obviously provides a good training environment since this was that UAS's third consecutive success.

THE DEVIZES TO WESTMINSTER CANOE RACE

Canoe racing is certainly a contrast from sitting in a cockpit, but A Plt Offs Tim Coslett and Steve Hawkins of Southampton UAS have proved that the activities are not incompatible. The Devizes to Westminster canoe race, which covers 125 miles, not only requires competence on the water but overall fitness, since the canoe and contents have to be beached and carried round obstacles; this is technically known as portage. For 2 months before the race the competitors had a rigorous training schedule which in retrospect appeared more appropriate to an Olympic decathlon entrant. Although only two members raced, other members of Southampton UAS provided the all important back-up support both before and during the race. The race started at 1230 hours on 1 April and ended, for the team, 23 hours 40 minutes later. The weather conditions were so bad that half the original 180 crews dropped out before the end. Although the team was placed 23rd overall, they achieved their ambition and were the fastest RAF crew in the competition.

NORPED 1983

Although not a competition, the annual 26th Joint Service Expedition of 15 members had 5 UAS representatives. These were Cdt Plt Dave Spooner and A Plt Off Mike Newby of Northumbrian UAS, A Plt Off Ian Jones of Wales UAS and A Plt Offs Dave Longhurst and Paul Nelson of Oxford UAS. The expedition, which focuses on the icecap of Jostedalsbreen in Norway, provides 4 weeks of challenging mountaineering. The team members were of various levels of expertise before the expedition started but by the end, with progressive training, all were much more confident and infinitely fitter and had had an unforgettable 4 weeks.

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1984-1985 - UAS News (2)

RECRUITING FOR THE UNIVERSITY AIR SQUADRONS

This article has been prepared by Flt Lt L M Warrington, QFI Liverpool UAS

There was an article published some time ago by a member of the staff of the OASC at Biggin Hill which referred to candidates hopeful of being commissioned in the Royal Air Force as the "Cream of Britain's Youth" or "COBY's". I intend in this article to give an insight into how the University Air Squadrons skim the churns of academic gold top in their quest for good quality Air Squadron Supporters or "ASS's".

It all begins with some high-powered advertising during the University "Freshers Week". This takes the form of a display featuring pictures of Bulldog aircraft in various (legal) attitudes over various (legal) locales. This is reinforced in true Central Flying School style by high visual impact aids such as flying helmets and sick bags. It is here that we first set eyes on the prospective ASS. He will ask if he can join the squadron, how much it will cost and when told "Nothing" he will ask "What's the catch?" If he is convinced there is none, we then have to ask four mandatory questions which he must answer satisfactorily to be considered for initial interview. I only hope there are not too many 24 year old Chinamen with bullion-glass spectacles and hay fever who now consider themselves non-starters in the human race.

The initial interviews are conducted on an ASS versus QFI level. This eliminates those (the ASSs not the QFIs) whose sole interest in life is watching "Crossroads" and those who are prevented from ever wearing an oxygen mask by various, irremovable pieces of decorative hardware inserted in, up and around the nostrils. There is also a filter here for those who have done time in "the Scrubs" for armed robbery and for aviation enthusiasts whose only contact with flying has been drug-smuggling by Cessna in the summer vacation.

There then follows a medical examination where candidates who possess one-leggedness are sadly bid farewell. These things can be missed by the interviewer whilst conscientiously writing notes, particularly the other side of a desk. There may also be a discussion at this stage as to whether ASSs with names such as "Kosygin" or "Guevara" will manage to slip past those with the eagle-eyes at Rudloe Manor.

Events now progress to the most interesting phase — that of the final interview. This is normally conducted by the Commanding Officer of the UAS, ably assisted, where possible, by a University Professor. There is a third member of the Board whose job is that of a scribe and also to stare fixedly at the ASS to put him at his ease.

The candidate's patience is tested at this stage by asking him an identical set of questions to those he has already spent 45 minutes answering on paper. These questions trace his life from the cradle to the hall of residence he now occupies. It is here that the interviewer must exercise the poker-player's skills of keeping a straight face and not giving way to expressions of incredulity or fits of uncontrollable hilarity.

The candidate's schooling and academic abilities are assessed to determine if he has the ability to study and gain a degree and, coincidently, devote his spare time to the UAS. Findings on this score range from the marginal to one ASS who almost had more 'A' levels than the sum total of the Board. Asked if he was pleased with his achievements he explained he was bitterly disappointed — as was his father — so much so that they didn't speak to each other for a week; this period coinciding with the family holiday in Paris. He thereby learnt the principle that "you-can't-please-some-people-any-of-the-time" which will stand him in good stead if he ever becomes a squadron entertainments officer.

Whenever recruiters meet, the word "initiative" will not be absent from the conversation for long. This quaity was beautifully illustrated by a young man who was asked how he had spent his time between leaving the VIth form and arriving at University. He explained that he had been fascinated by pictures of the Afghan War on television news programmes and decided he would like to see it at first-hand. He had somehow got to Afghanistan, made contact with a rebel group and had spent 6 months with them staging guerilla attacks on Soviet armoured vehicles. I hope the interviewer exercised **his** initiative and replied "That's all very well, but were you ever in the Scouts?"

Although it is not necessary for a prospective member of a UAS to express his intention of joining the Royal Air Force to fly, it is the primary role of the squadrons to find high-calibre potential officers for that purpose. To that end it is advisable to examine the candidate's motivation and his interest in aviation. One of the easiest ways of doing so is to ask the simple question "What makes an aircraft fly?" Some answers to this riddle would be quite useful to a QFI taking his A2 examination, yet if he utilised some of the other replies in a similar scenario it would ensure a rapid posting to Saxa Vord — such as the bright-eyed, eager response, "Its the propeller!" Easily countered, that one. "What about a Jet?" Long, red-faced, silence punctuated only by the occasional "Er....".

The type of leisure activities pursued by a candidate can provide an accurate insight into his character and personality. Interests span the range between sporting and sedentary, intellectual and frivolous. Membership of the "Irish Society" listed on one application form demanded closer scrutiny by the Board, who possibly feared some sinister security connotation. The following explanation was proferred "Any Society who can get me to Dublin for a 12-hour visit round the Guinness Brewery for 75p can't be all bad". He was enlisted immediately.

One of the sadder facets of recruiting this year was having to refuse squadron membership to some delightful young ladies who expressed great interest in learning to fly. The pros and cons of whether to employ women as aircrew in the RAF are way outside the scope of this article, but I am sure I speak for most QFIs in believing that at least females woud brighten the place up a bit! This would be, I suspect, a view not wholly endorsed by the feminist movement. Nevertheless, the proposal to recruit female UAS members is being studied and may come to pass in the future. However there is probably one situation likely to arise which has not been considered in the corridors of power. Consider a wife who having met a blonde, vivacious attractive student (a female one) at a squadron party, being left with the following haunting phrase at 8.30 a.m. "I'm just off with Bloggs this morning to practice slow rolls". It could go a long way to shattering hard-won connubial bliss.

Any reader who has passed through the UAS system will realise that the squadrons do provide high-quality, competent and well-motivated officers for the RAF. These people will no doubt soon solve the eternal question of why such finely-honed intelligence drops to 10% of normal output when encased in a "bone-dome".

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The University Air Squadrons

Squadron Leader I Pallister BSc RAFR, SO2 Force Development, HQ 1 Elementary Flying Training School

The underlying theme of this year's RAF College Cranwell Journal is 'engagement with other agencies' and this is particularly pertinent to the 14 University Air Squadrons (UAS) whose National footprint is, perhaps, second only to the RAF recruiting organization. First established in 1925, the UAS have maintained a presence on university campuses across the country through World War 2 and numerous Defence Reviews. They remain as vibrant and relevant today as they have ever been, bridging the gap between youth organizations and the regular Royal Air Force and maintaining strong military ties with academia. This longevity has been achieved by moving with the times to ensure that the training and experience provided still sparks the imagination of high-calibre undergraduates to encourage them to commit to at least 2 years of service whilst studying for their degrees.

The history of the UAS organization was covered in some detail a few years ago in a previous issue of the College Journal, but to recap for those new to the publication, after starting quite informally with 'civilianized' squadrons at Cambridge and Oxford, the UAS establishment steadily grew to a peak of 23 units during World War 2, during which they also conducted formal Elementary Flying Training (EFT). The end of the War saw the closure of a number of the smaller squadrons but, apart for one or two amalgamations or mergers, the footprint has remained pretty constant through many Defence Reviews and ensuing drawdowns. Fourteen UAS remain, located from Southampton in the South to 'East of Scotland' at RAF Leuchars in the North, the latter resulting from the merger of the East Lowlands and Aberdeen squadrons. Each has its own unique history and it is worth taking a look at their individual stories which are available through the RAF Website. Several UAS are approaching, or have just passed, their 75th Anniversaries and these are being marked by various public events.

Whilst the squadrons act as mentors for RAF-sponsored students who have a bursary or cadetship, the majority of UAS cadets are recruited locally from the squadron's catchment universities at freshers' fairs and, for many, this is their first experience of military life. They are attested into the RAF Volunteer Reserve (VR) as Officer Cadets for a nominal 2-year engagement, which may be extended for a third year on the recommendation of their squadron commander. Those taking up management appointments as flight commanders or senior students may be commissioned for one year as Acting Pilot Officers.

The delivery of formal EFT on the UAS ceased in 2006 when a new training syllabus was introduced. This has evolved further in recent years, both on the ground and in the air. Despite the reduction in the amount of flying available on the UAS, many students still achieve the important milestone of 'first solo'. Those who are particularly keen can, and do, go on to an applied phase of flying which includes aerobatics and navigation, with a significant number obtaining the coveted Preliminary Flying Badge having completed the UAS flying syllabus. Work is now in hand to recognise this achievement more formally with a shorter EFT course for those who enter the RAF as pilots and have completed a certain amount of UAS flying. The UAS ground training syllabus has been similarly modernised and the leadership elements are now accredited by both the Institute of Leadership and Management and the Chartered Management Institute for an Award or Certificate at Level 3 and Level 5 respectively. This is a particularly significant step in the current jobs market where an internationally-recognised qualification provides proof of relevant training and experience and can make all the difference in helping ex-UAS cadets land that all important job interview.

A major development this year has been the reintroduction of formal training for our UAS senior students prior to their being commissioned as Acting Pilot Officers. Close cooperation between the Officer and Aircrew Cadet Training Unit (OACTU) and Headquarters 1 Elementary Flying Training School (HQ 1 EFTS) staff enabled delivery of an intensive 8-day course comprising selected elements of Initial Officer Training, adapted for the UAS environment. The course was universally well-received and, on 16 September, 33 cadets proudly received their Pilot Officer rank insignia from the Commandant following a parade and inspection in front of College Hall.

Delivery of this course was the first milestone in a wider initiative to adapt UAS training to meet the basic requirements to obtain a commission in the RAF Reserves. The continued evolution of the pan-UAS force protection 'STRIKE' exercises, organised by our own RAF Regiment Staff, is another significant step. Such is the success and popularity of these exercises that they have now outgrown the facilities of the local Beckingham Training Area and the deployed phase has been moved to Stanford Training Area (STANTA) near Thetford. During 2011, the final exercise had 88 volunteer trainees – more than twice the previous average. The whole UAS training package has now been mapped against the RAF's Generic Education and Training Requirement (GETR) and, not surprisingly, most of the objectives of Phase 1 training were already being achieved in one form or another. The next stage is to bring this onto a more formal footing by accrediting UAS training against the RAF Reserves basic training syllabus. UAS service will allow the cadets an easier transition to Reserve Service, for those that wish to retain their ties with the RAF, either directly after graduation or in the future. It also will provide a seam of high-quality personnel capable of entering the RAF Reserves.

HRH The Princess Royal attending the ULAS 75th Anniversary reception at the RAF Club.

Officer Cadets from Bristol and Wales UASs Ardeche Expedition, France July 2011.

However, the UAS are about far more than providing training for personnel who might enter the regular Services or Reserves. As the Services reduce in size, the close links that many in society had with the Services, either through relatives or friends, is diminishing and in a democratic society it is important that people have a sound understanding of the Services, one which goes beyond the sound-bites provided by the media. By engaging and influencing some of the brightest and best from our universities, many of whom will go on to be leading lights in business and society, the UAS help ensure that influential elements within UK society understand the needs of our Services, including the Reserves, both as individuals and employers, the latter being particularly important as Defence moves towards a Whole-Force Concept towards the end of the decade which will see an increased reliance on Reserve Forces.

Continuing the theme of engagement, this year has seen 3 squadrons involved in Freedom parades. East Midlands UAS was awarded Freedom of the City of Nottingham, and RAF Woodvale represented by both Liverpool UAS and Manchester & Salford UAS, received the Freedom of the Borough of Sefton. The latter was proudly exercised when an armed flight was included in the Remembrance Sunday parade in Southport – prepared to a high standard by our own ex-Queen's Colour Squadron RAF Regiment Officer, Flt Lt 'Geordie' Forster.

Whilst such high-profile events might steal the headlines, they represent just the tip of a very large iceberg of UAS engagement activities. Cycling from London to Paris and from the Blackpool Tower to the Eiffel Tower, rowing from Oxford to London, nearly 150 UAS cadets from 10 squadrons completing the Nijmegen Marches (with Liverpool UAS being nominated the best RAF team), not to mention the numerous half marathons, charity abseils and other challenging activities; the ingenuity of students for fundraising knows no bounds and all show the RAF in a very good light up and down the country. Each year the individual squadrons raise many thousands of pounds for local and Service charities.

As we have seen, the UAS world does not stand still and neither are we immune from the severe financial constraints now affecting us all. Students are still able to experience and enjoy the challenge of military adventurous training, albeit that most of it is undertaken closer to home in the UK and Europe. Every cadet is also encouraged to participate in at least one Staff Ride to France, Belgium or the Netherlands to research and learn from past military encounters. Experiencing at first hand the sheer scale of courage, commitment and loss in the two World Wars has a profound affect on all those who attend.

Looking ahead, several squadrons face an uncertain future due to the planned closure of their parent units, but this is a situation that many have endured before and emerged from stronger than ever at their new home. And by the time this article is published, No 1 Elementary Flying Training School will have been absorbed into No 3 Flying Training School at RAF Cranwell on 17 December 2011. So the UAS will yet again come under a different umbrella organization. The one constant throughout the changes and turbulence being experienced in Defence post-SDSR is the enthusiasm and commitment of our UAS students which remains as strong as ever. The quality and strength of our UAS personnel bodes well for the future of the RAF as a whole.

Freedom of the City Parade.

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1985-1986 - Boys Wing

65th ANNIVERSARY OF THE BOYS-WING (FIRST AND SECOND ENTRIES) RAF CRANWELL

This article has been prepared by Wg Cdr I H Wilkie RAF, Wg Cdr Coll Sec

We all associate Cranwell with the Cadet College, the first military air academy in the world, which was opened on 5 February 1920. However, there was also another establishment, the School of Technical Training for Boy Mechanics, which received its first boys in February 1920.

In his memorandum of 1919, which Churchill introduced into Parliament as a White Paper, Lord Trenchard described the training of the men of the new Royal Air Force as "the most difficult problem of all in the formation of the new force". He went on, "It has been decided to enlist those belonging to long apprenticeship trades, as boys, who will undergo a course of training, before being passed into the ranks of the Royal Air Force. The training of all these boys will eventually be carried out at Halton Park, where ample and well equipped technical workshops are already in existence. A scheme as been drawn up for the future enlistment of boys by means of a competitive examination. By this means it is hoped to secure a really high standard within the Royal Air Force".

In addition to the buildings that were already at Halton, the construction of stores, machine shops and barracks was needed to accommodate the 3000 youths who were to be recruited and based there. Lord Trenchard was determined not to rush the building programme for what was to become a permanent home of apprenticeship training in the Royal Air Force. It was not finally completed until 1926.

In the meantime the first boys were recruited and sent to Cranwell for their training. No 1 Entry arrived at Cranwell in February 1920 and they were joined by No 2 Entry in September. No 2 School of Technical Training (Boys) was formed, usually known at Cranwell as the Boys Wing. Commanded by Wing Commander C F Kilner DSO, the Boys Wing was organized into 3 Boys Squadrons and a Headquarters Squadron consisting of the Service instruction and administrative staff. They were located in the East Camp occupying the buildings around the Parade Square, many of which are still in use. Academic subjects were taught by civilian instructors – English, Mathematics, Science and Mechanical Drawing, whilst technical subjects such as Aerofitting, General Fitting, Carpentry and Rigging together with practical engineering were taught by Service officers and NCOs.

No 1 Entry should have passed out in December 1922 but, owing to an outbreak of Scarlet Fever in the Wing and the difficulties experienced in acquiring the technical equipment needed, they were given an extra 4 months technical training and passed out in 1923.

The first entry of aircraft apprentices to Halton was in January 1922 and, in the ensuing years Halton gradually supplanted Cranwell as the principal training establishment for aircraft apprentices.

On 5 September 1980, 57 ex-members of Nos 1 and 2 Entries celebrated their 60th Anniversary by revisiting Cranwell. The Senior Boy, Air Vice Marshal L W Cannon CB CBE, said at the time that there would probably be no more reunions; however, the Air Marshal, who seems to get younger as the years pass, recently suggested that we should consider a 65th Anniversary. The date chosen for the Anniversary was 6 September 1985 and 27 members of No 1 and 2 Entries came to Cranwell.

The day was a great success. The Boys were hosted by young cadets and their programme included a presentation on the history, development of training and the role of Cranwell today followed by luncheon and, in the afternoon, a drill test and a tour of the Campus. It was a great honour for all involved in the visit to entertain the Boys.

(We regret to report that Air Vice Marshal L W 'Bull' Cannon CB CBE died on 27 January 1986).

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2010 - Elementary Flying Training (1a)

Elementary Flying Training – Historical Perspectives and Lessons for the Future

Squadron Leader Pallister, SO2 Force Development, HQ 1EFTS

In last year's Journal we looked at the history of the University Air Squadrons (UAS) and how their ground training and personal development syllabus has evolved in recent years. This article takes a different perspective by examining the RAF's approach to Elementary Flying Training (EFT) and how this has affected the flying training provided by the UAS.

No matter how sophisticated aircraft become, one consistent factor is the need to teach the basics to those who have never flown before. In the very earliest days of the Royal Flying Corps this task was fulfilled by civilian flying schools. Officers had to learn to fly at their own expense. Only when they presented their Royal Aero Club aviator's Certificate were they considered for flying duties and they then received a £75 refund (over £3000 in today's money!) towards the cost of their training. This process continued even after the formation of the Central Flying School in 1912 as the primary aim of CFS at that time was not to produce aviators as such, but professional war pilots.

With the support of Dons, many of whom had aviation experience during the 1914-18 war, Lord Trenchard finally convinced the University Authorities to allow the formation of the first two UAS in 1925. Although commanded by regular officers, these squadrons remained civilian in character. Members paid a subscription for the privilege of membership, had no obligations of a Service nature and were not subject to military regulations. Indeed, they wore no uniform other than blazers and ties. Flying training was carried out at nearby RAF units in a variety of aircraft including the Avro 504K, Avro 504N, Avro Tutor, Armstrong-Whitworth Atlas, Bristol Fighter, DH9A, Hawker Hart and Hawker Hind.

On the outbreak of the Second World War no further requirement was foreseen for the UAS and they disbanded in September 1939. However, the War Office retained the Officer Training Corps at the Universities and it soon became clear that they were attracting suitable graduates to the detriment of the RAF. The Air Ministry therefore decided to re-open the original three squadrons and establish a UAS at a number of other universities and colleges. By the end of 1941 there were 23 UAS covering all corners of the country from Aberdeen to Exeter. The war-time UAS gave pre-Service training to potential officers of all branches of the RAFVR. However, whilst they covered much of the elementary flying ground school subjects (aerodynamics, navigation, meteorology etc) actual flying training was restricted to very occasional flights in Tiger Moth aircraft although a few squadrons were able to get flights in a variety of aircraft at nearby RAF stations. By the end of the war, five squadrons had disbanded following a government decision to suspend university courses for Arts students. Nevertheless, the UAS had contributed some 2500 aircrew to mobilised service in the RAFVR, many of whom were decorated for meritorious service.

By 1947 only 14 of the 23 UAS remained. They were intended to provide flying and ground training for students who wished to prepare for commissioned service in the RAF or Royal Navy, to stimulate serious interest in flying and aeronautical problems and to maintain liaison with the university authorities. Until 1950 the Tiger Moth was used for flying training but these were replaced by Chipmunks later that year. During the summer of 1950 three UAS cadets undertook a full 'wings' course and from this success stemmed a decision to provide certain squadrons with Harvard aircraft so that members who volunteered for service in the RAuxAF could gain the 30 hours on type needed to go on to the full 'wings' course. This initiative was short lived, however, and the aircraft withdrawn but in its place the preliminary Flying Badge (PFB) was introduced. The PFB was awarded to those UAS members who passed the appropriate exams and completed 110-120 hours flying with "high to above average ability". Also, as an experiment, non-flying flights were formed at certain of the universities. These included a Navigator Flight at Cambridge and Fighter Control Flights at Cambridge, Oxford and London. A year later, Technical Flights formed at Nottingham and Southampton, and Airfield Construction Flights at Birmingham and Leeds. For the first time in history, females were able to join the Fighter Control Flights at Oxford and London.

1957 saw another review of UAS establishments. As a result the Navigator and Fighter Control flights were disbanded and the pilot establishment on each squadron reduced by up to 40%. As financial constraints continued to bite, a Service Paper written in 1962 looked critically at the value of the UAS system. It concluded, inter alia, that the squadrons contributed significantly to the recruitment of officers of all branches but that, importantly, the wastage rate in pilot training of ex-UAS pilots was approximately one third that of their direct entry (DE) counterparts. Such was the saving that the paper concluded that the whole UAS system was virtually self-funding. The unquantifiable bonus was, and still remains, the number of graduates who go on to other careers and take with them an understanding of and empathy with Defence and the RAF in particular.

This contrast between ex-UAS and DE pilots is interesting for, whilst the Army and Navy had maintained some form of EFT, the RAF had not hitherto seen the need and its DE pilots at that time went straight onto the Jet Provost. However, the tradition of civilian provision of EFT had continued throughout the war years and beyond through The Airwork Company. Although the UAS had RAF Qualified Flying Instructors (QFIs), their aircraft were maintained by Airwork who also provided EFT for the Army at Middle Wallop and Royal Navy flying grading at Plymouth airport. With the coming of the Bulldog in the early 70s, elementary flying for RNAS pilots was conducted on a fully Service-manned RNEFT Sqn by RAF and RN QFIs at RAF Topcliffe. This continued until 1993 when the RNEFTS was disbanded and replaced by a tri-Service Joint Elementary Flying Training School (JEFTS) which subsequently moved to RAF Barkston Heath in 1995 to create headroom at Topcliffe for an increasing Tucano task. JEFTS was a fully contractorized operation by Hunting Contract Services but with a number of embedded military QFIs, operating the Slingsby Firefly. This took DE pilots up to the point of streaming for fast jet, multi-engine or rotary training, with UAS cadets completing a similar syllabus on the Bulldog during their studies. As a result of airspace congestion in the Cranwell area, which was slowing down the School's output, the RAF element of JEFTS moved in 1999, with its aircraft, to RAF Church Fenton leaving the Army and Navy together once again at Barkston Heath. However, this set up was still unable to cope with an increasing RAF task so 'Direct Entry Flights' were set up on a number of UAS to utilise spare capacity. In 1999 the Grob Tutor had begun to replace the Bulldog on the UAS under the Light Aircraft Flying Training (LAFT)

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From front - Tiger Moth, Chipmunk, Bulldog, Harvard, Tutor.

contract with VT Aerospace providing a 'by the hour' service using its own aircraft flown by military QFIs.

With the JEFTS contract due for renewal in 2003, a study into the provision of EFT for the RAF concluded that it would be more cost-effective to train all DE pilots alongside their UAS colleagues. This allowed for the closure of the Church Fenton operation and down-sizing of the JEFTS contract, then held by Babcock Plc, to train only Army and Navy pilots. JEFTS was subsequently renamed the Defence Elementary Flying Training School (DEFTS).

The conduct of all RAF EFT on UAS was not without its difficulties. DE pilots were able to maintain better continuity in training without the added pressure of university studies. Furthermore, the UAS graduates having been already streamed for their next phase of training were taken away from flying for the 33 weeks of their Initial Officer Training (IOT). Thus, in a reverse of the fortunes of the 50s and 60s, DEs were now better placed than their UAS counterparts. Following a further study into this inequality it was decided to completely reform EFT within the existing LAFT contact. Three new EFT sqns were formed using aircraft and QFIs withdrawn from the UAS and formal EFT is now undertake by all (DE and UAS) pilots after completion of IOT. ,UAS flying was reduced to a minimum but made available to all UAS members and not just those with the potential to be RAF pilots. This move, whilst initially viewed with suspicion, has proved to be popular with the students and the UAS syllabus has subsequently evolved to allow those with sufficient drive and enthusiasm to gain the coveted PFB during their time on the sqn.

So the wheel has come full circle but the value of EFT is now fully appreciated, especially as light aircraft are so much cheaper to operate than more complex types. Even the most sophisticated simulation cannot replicate the first few hours in the airborne environment that are the key to developing sound airmanship and spatial awareness. And nothing can replace the thrill of that first solo! The next stage of evolution will be the integrated UK Military Flying Training System which has already recognised the value of EFT. Meanwhile, the UAS system continues to fulfil its unique role of bridging the gaps between the Air Training Corps and the RAF, and between Academia and the Military. Long may it continue!

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King's College London RAF College Staff.

Air Power Studies and the RAF

Dr Hayward, Dean of the Royal Air Force College

When we came to the Royal Air Force College in November 2005 to establish a new academic department as well as a broad and critical university-level curriculum for officer cadets, my lecturers and I were motivated by one overriding thought: the Royal Air Force that we had long admired may not be the biggest air force in the world, but it darned well should be the best. And to be the best it needs to be the brightest. With the possibility of further size reductions flowing from the Strategic Defence Review that will almost certainly follow the General Election in 2010, this overriding thought has become something of a mission.

Interpreting this imperative in terms of our own humble role within the RAF, my lecturers and I have worked with course sponsors to design a curriculum and create teaching and learning philosophies aimed at helping the RAF to develop junior officers who are:

- Globally, politically and culturally astute
- Conscious of their society's ethical framework
- Familiar with the RAF's rich history, key concepts and contributions to peace
- Mentally agile
- Capable of critical thinking

As the lecturers and I commenced developing courseware in partnership with RAF trainers we all felt a profound sense of responsibility to equip our junior officers with the cognitive skill-set necessary to ensure that they will remain safe, credible and effective when they serve on operations. The skill-set needed in Afghanistan, for instance, is different in many ways to that needed in previous generations, when war and conflict were easier to understand and the strategic environment was more predictable and less ambiguous.

We recognised immediately that we now needed to make sense of and explain the nature of current operations and those likely to occur. We needed to identify and implement the types of training and education best able to create well-rounded and physically and intellectually robust junior leaders who can flourish in or while supporting those operations.

The key word in my previous sentence is "leaders". My lecturers and I naturally understand that we have different imperatives to those found in civilian university programmes. We are not producing writers or journalists or teachers, or even scholars like ourselves. We are producing junior officers, who shortly after commissioning may be leading others in dangerous and confusing environments and situations that are, thankfully, alien to almost all civilians. Our cardinal role, therefore, is to support the development of leadership – in a manner and with concepts consistent with the Mission Command philosophy taught by OACTU's leadership instructors – by enhancing cadets' problem-solving skills, intellectual agility and understanding of strategy, war and ethics.

The Air Power Studies team I oversee — currently comprising thirteen King's College London staff — teaches primarily throughout IOT's first two terms. Our curriculum is consistent with mainstream university courses, both in terms of the intellectual level of tuition and the rigour of assessment. We intend our lectures to convey basic information, provide context and meaning and raise important questions. We try to make lectures as interactive as the class sizes will allow; that is, to be engaging dialogues, not stuffy monologues. Yet the cadets' best learning by far occurs in small-group tutorials (called Syndicate Room Discussions, or SRDs), where we give the cadets opportunities to research, test and debate their ideas in a free and open-minded but structured fashion. With students taking ownership of their own ideas, and exposing them to peer critique from classmates, these SRDs have made a highly positive impact on the way the cadets perceive such issues as truth, objectivity and bias.

We have created an Air Power Studies curriculum that deliberately resembles an advanced staff course in its breath of themes and topics, although it is naturally pitched at a far less sophisticated level. The curriculum unfolds in a logical fashion, with ideas developing from broad to focussed and general to specific. Our teaching philosophy places more emphasis on interpretation and explanation than on narrative and description. In other words, we encourage cadets to value more than just "the facts" about events and actions. We get them to wrestle with ethical considerations, competing cultural and national viewpoints and the complex relationship between cause and effect. During 2008 and 2009 we strengthened our already-credible ethics package in response to officer cadets' needs (as revealed in their course validations) and the guidance and encouragement of the RAF's senior leadership.

My lecturers always look to reward logical and source-based arguments in those areas, as well as evidence of imagination and reflection, when they mark the cadets' tests, exams and essays. Key among the assessment pieces are essay-style exams and, in particular, the Bandar Essay, in which each cadet must research, develop and express an argument in answer to a complex essay question that he or she chooses from a set list. A typical Bandar question might be something like, "Why does the United Kingdom retain nuclear weapons?" Another might be, "How just was NATO's war against Yugoslavia in 1999?"

Our curriculum begins in the first term with a series of lectures and SRDs on the international system that pose weighty questions: Why do States not always manage to get along? Why do they compete as well as cooperate? Why does statecraft not always manage to prevent conflict? Why do States sometimes use war as their means of solving conflicts? What is war's inherent nature?

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Cadets then learn about ideas and assumptions on morality, which they get to critique. How relevant is the Just War doctrine that has evolved for two thousand years? Why should wars be fought for ethical reasons, as opposed to more pragmatic "real" reasons? Why should they be fought ethically, even when perhaps the opponent is fighting unethically? What are the consequences of acting (or being perceived as acting) unfairly or disproportionately?

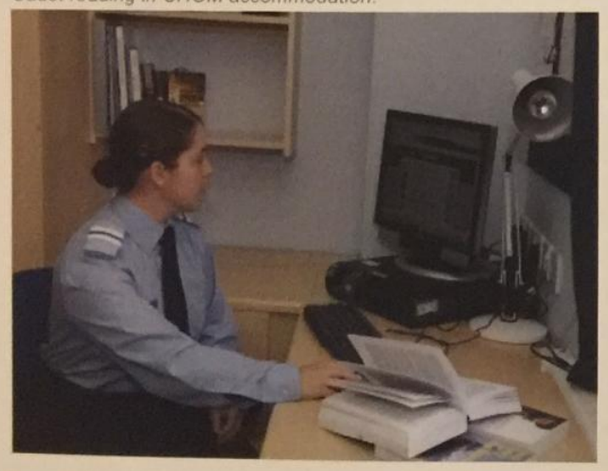
All these big questions establish a framework for the capstone module on air power and its evolution that commences in IOT's second term. This module generally follows chronology and traces the development of military aviation from the First World War to the so-called War on Terror. Yet it is also taught thematically, and then viâ case studies, so as to draw out the central questions. In what ways has air power transformed strategy? How sensible were early beliefs that air power should be used primarily against civilians and their will and morale? How effective were attempts to implement such strategies? How just were those attempts? What new ideas have allowed strategists and practitioners to use air power in different ways? How effective have they been in theatre-sized wars since 1945? How successful have they been during the War on Terror? In what ways can air power develop so as to serve the cause of peace in coming decades?

During the third term, all cadets undertake a two-week Basic Air Warfare Course at the RAF's Air Warfare Centre Cranwell. Taught by RAF instructors with recent operational experience as well as some of my academics, this course explains to cadets how on a day-to-day basis they will, as junior officers, be utilising the traditions, theories, concepts and doctrine that they have already learned from my Air Power Studies team. The focus is primarily practical, although the instructors do stress the context and consequences of all tactical activities.

Cadets also benefit from visits to one of Lincolnshire's air museums and a Second World War RAF operations room. Bringing alive the valour and effort of their forebears, which are explained by my staff, these visits strengthen cadets' esprit de corps and help them to comprehend the continuity of service given by generations of RAF officers and airmen. By visiting a modest local RAF cemetery, in Scopwick, they also gain a poignant reminder of the sacrifice that the British Empire's airmen made in their tough fight against tyranny.

Looking back on my first four years at the College I do feel satisfied by the progress that we have made in creating a more effective balance between traditional "informational" training and broad and critical "transformational" education. The educators that I have the privilege of overseeing have undoubtedly introduced a broader and more challenging academic curriculum than the RAF College has had for some years.

Cadet reading in CHOM accommodation.



Yet we must not become complacent. Our officer cadets deserve our best efforts to keep our curriculum responsive to their changing or newly emerging needs as well as relevant to the strategic and operational environment in which they will serve. This issue of relevancy is critical to us. We would be failing in our duty of care if we allowed the curriculum to stagnate or to cease to evolve in keeping with the world's ever-changing strategic concepts or experiences.

The RAF Crest - CHOM gate.

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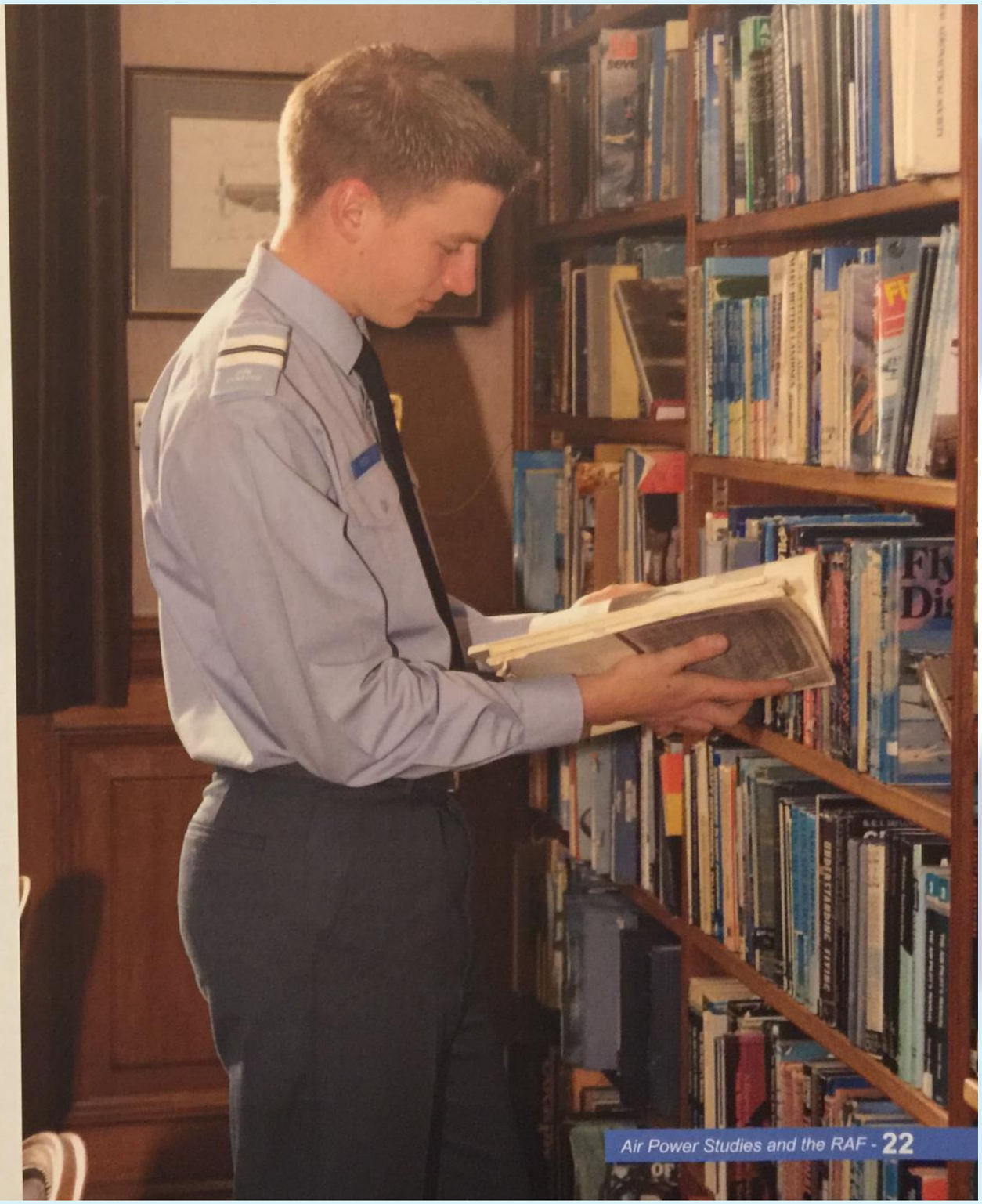
Some of the other challenges confronting me in coming years relate less to IOT and more to my wider responsibilities as Dean and as a Director of the RAF's Centre for Air Power Studies (RAFCAPS). During 2008 my lecturers began introducing small, discrete but carefully focused academic air power studies programmes into various non-commissioned officer courses taught at RAF Halton, which comes under the College's organisational umbrella. This bold RAF initiative has made the RAF perhaps the only air force in the world to extend university-style broad and critical education beyond its corps of officers. The rationale is wise and impossible to challenge: if greater knowledge and comprehension and better problem-solving abilities bring increased safety, credibility and effectiveness, then all RAF personnel deserve them. Personally I think it is a wonderful initiative and — while I am acutely aware of my grave responsibility to devise thoughtfully and introduce gently an effective curriculum pitched at the right experience levels for NCOs — my team and I are proud and excited to be involved. We even now have a lecturer based permanently at Halton.

The UK's first MA degree in Air Power Studies

2009 proved to be an especially busy year for me and two of my lecturers, Drs Andrew Conway and Christian Anrig. We found ourselves devoting a huge amount of time and effort to the creation of the United Kingdom's very first masters degree in air power studies. Created especially for the Royal Air Force, but also open (and of tremendous benefit) to air power-minded civilians, this new MA degree, titled, Air Power in the Modern World, is an interactive King's College London distance-learning programme created especially to address the needs of the modern RAF as it equips its personnel to perform their duties as safely, effectively and credibly as possible in the new strategic arena which is, and might be for some years yet, characterised by counter-insurgency warfare. The RAF responded to the ambiguities and uncertainties of that environment and to the RAF's own diminishing size by providing its personnel with structured education — including the new MA —that significantly develops their strategic understanding, intellectual dexterity and problem-solving abilities. The new degree explores the relationship between integrated and independent air power (what we used to call "tactical" and "strategic" air power) and develops ideas pertaining to the former that are directly relevant to today's operational realities. Any RAF personnel wanting information on the new air power studies MA and the RAF fellowships that fund several places on it should go to: http://www.kcl.ac.uk/schools/sspp/ws/grad/programmes/wimw/raf/

The Royal Air Force Centre for Air Power Studies

As well as having responsibility for delivering coherent curricula on various RAF training and educational courses, I have the tremendous privilege of being one of the three directors of the RAF's national think-tank: the Royal Air Force Centre for Air Power Studies (RAF CAPS), which was launched on 23 August 2007 by Air



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2010 - Air Power Studies (1d)

Chief Marshal Sir Glenn Torpy KCB CBE DSO ADC BSc (Eng) FRAeS FCGI RAF, who was then the Chief of the Air Staff.

In his speech at the Centre's launch, Sir Glenn acknowledged that the RAF's relationship with academia in recent years had been "patchy" and that the new Centre represented the ability to harness enormous intellectual horsepower by bringing thinkers from various academic institutions together with RAF air power doctrine and concepts specialists. We humbly believe that things are now far less "patchy".

Nominally based here at the College but with constituent parts located elsewhere, the Centre has three units operating synergistically at its core: the Air Power Studies Division of King's College London; the Directorate of Defence Studies (RAF); and the Air Historical Branch (RAF).

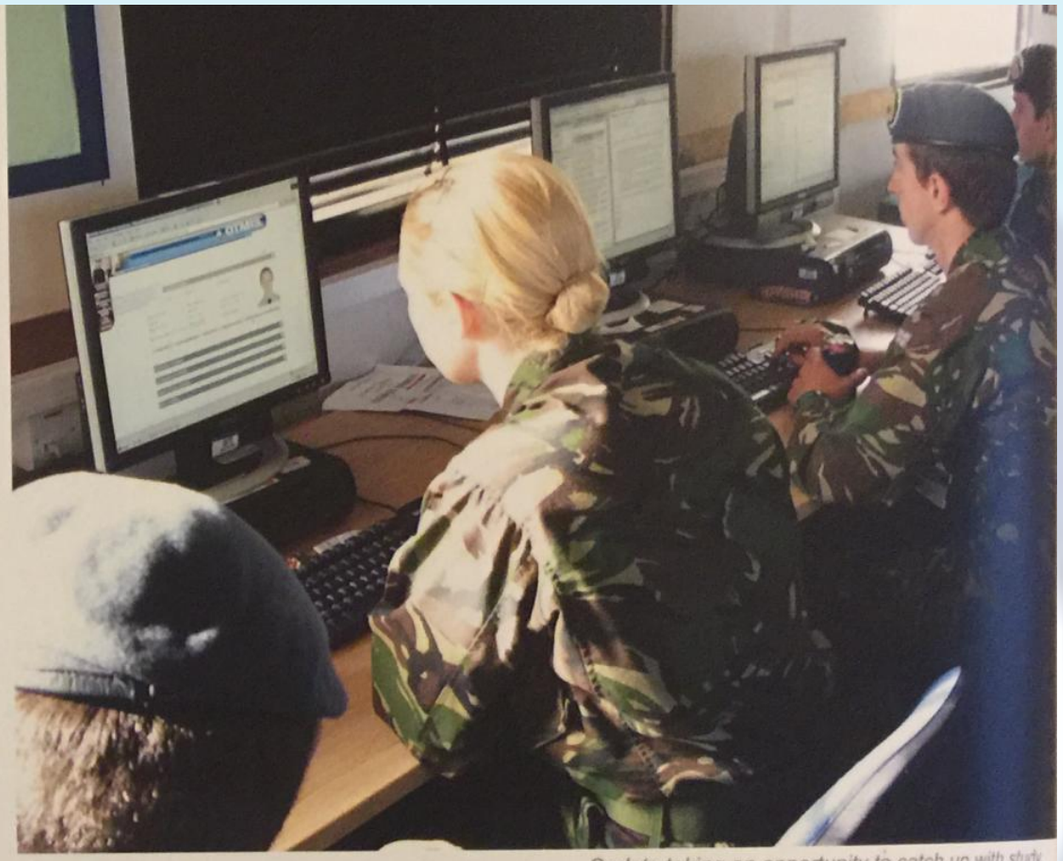
The Centre aspires to strengthen the relationship between academia and the RAF and to utilise the enhanced collaboration to develop and stimulate thinking about air power in both areas, as well as more broadly throughout the United Kingdom. The RAF CAPS is ideally placed to enhance the RAF's current and future operational effectiveness by improving the ability of the Service to apply lessons from the past to both the present and the future.

The Centre aims to:

- Act as the RAF's centre for strategic and conceptual thinking about air power.
- Encourage and promote the study of air power, particularly within the Service and academia, but also throughout the broader intellectual community (including the media and think-tanks).
- Develop a reputation for academic excellence in air power studies in order to become the UK's foremost centre for air power thinking.

Since its launch in 2007, the RAF CAPS has earned a reputation as a leading centre of excellence in the field of air power studies. Its website — http://www.airpowerstudies.co.uk — is the first entry to appear on major internet search engines, including Google and Yahoo, for keyword searches including "air power" and "air power studies" and the site is now gaining more than 2,000 "hits" each month.

My fellow RAF CAPS directors and I have tried to make the website as user-friendly and useful as possible. With an aspiration for the website to serve as a "clearing-house" of internationally garnered information on air power ideas, concepts and study, we have created a regularly updated "Calendar of Events," which lists air power conferences, seminars, workshops and lecturers from across the United Kingdom and beyond. Perhaps more importantly, we have made important resources available on the website for free downloading as PDFs. These resources include the RAF's flagship journal, Air Power Review, which contains cutting-edge scholarship on air power. The website's free resources also include key doctrine publications, notably the brand-new fourth edition of AP3000: British Air and Space Power Doctrine, authored by my fellow director, Group Captain Al Byford, as well as entire downloadable books, such as my own edited collection, Air Power, Insurgency and the "War on Terror". For air power historians we have initiated the online publication of rare historical documents on air power, including WWII campaign narratives produced during and immediately after the war by the Air Historical Branch (AHB). Mr Seb Cox, the Centre's third Director and the Head of the AHB, is the prime architect of this important initiative.



Cadets taking an opportunity to catch up with study

The RAF CAPS is naturally more than a "virtual" centre. It runs annual conferences and workshops and it publishes in book form the proceedings. It liaises and works collaboratively with similar air power centres in other countries, including France, India and Australia. It also contributes significantly to the RAF's academics engagement strategy. Twice in recent years the RAF CAPS has brought various distinguished academic leaders together with key RAF strategists and policy-makers so that the RAF can have its own ideas critiqued by experts. Throughout 2010 we will continue to assist the RAF's senior leadership with its wider engagement activities.

To summarise, four years ago I elected to transfer to the RAF College from the Joint Services Command and Staff College because, after teaching mid-career and senior officers, I couldn't wait to work again with energetic, idealistic and curious young officers-to-be. I thought that perhaps my lecturers and I could help the RAF to develop a new generation of junior officers who might grow to love knowledge for its own sake and who could think freely and serve Her Majesty responsibly by weighing evidence and forming judgements based on imagination, logic, ethical awareness, the courage of convictions and an appreciation of cause and effect. As it transpired, from the moment my team arrived at the RAF College we have loved interacting with the hundreds of bright and committed young men and women who have joined the RAF in order to serve their Sovereign as officers. Their focus, effort and initiative are quite unlike those of any students we have taught before. We are very fortunate academics indeed.

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March 1997 - Scholarship Scheme (1a)

THE ROYAL AIR FORCE SIXTH FORM SCHOLARSHIP SCHEME

By OASC, RAFC Cranwell

Each year the Royal Air Force holds a competition for Sixth Formers to attract students of high ability into careers as RAF officers. The reward for success is a grant of £1050 during each year of Sixth Form study over a maximum of 2 years. In addition the successful scholars will be awarded a Flying Scholarship (if they have sufficient pilot aptitude) and a course of instruction called 'Preparation for Leadership' at the RAF Outdoor Activities Centre at Grantown-on-Spey in the Cairngorms. Upon satisfactory completion of their 'A' level studies the successful students will be close to securing a place at Initial Officer Training provided they have kept out of trouble with the 'law' and remain medically fit for service.

The award of a scholarship does not preclude a scholar from continuing into higher education; indeed, for some officer branches there is a need to possess a degree or external professional qualification; for such aspirants there will be a requirement for them to apply for university sponsorship.

The tedious part of the scholarship is the 'A' level study, but as with all scholarships the organisations making the award have a right to expect the recipients to buckle down to the groundwork! The 'fun' parts are the courses offered in addition: firstly the Flying Scholarship.

Each year some 500 flying scholarships are awarded to youngsters between the ages of 17 (the minimum age for going solo in a powered aircraft) and 20. The course consists of 20 hours flying over a period of 18 days. It is flown at one of a small number of flying clubs distributed through the UK on aircraft such as the Cessna 152, PA28 or Katana. The course of instruction takes the student through the early part (about halfway) of the Private Pilot's Licence syllabus. For those readers lucky enough to have gained a Flying Scholarship some years ago, you will recall that it gave you 30 hours flying - just short of the PPL requirement. We cannot afford to be quite as generous these days; moreover, the hours needed to gain a PPL have increased to about 45. Nevertheless, the 20 hours offered by the RAF gives any youngster a 'flying start'. Although this must be the most attractive of the scholarship schemes, the Sixth Form Scholarship is the one to go for if you are really serious about following a career as a RAF officer.

Notwithstanding the chance to get your hands on as much as £2100 over 2 years, the most challenging part of the Sixth Form Scholarship is the 2-week course in leadership and teamwork techniques at Grantown-on-Spey. Four courses are held each year: one at Easter and 3 during the months of June and July. The first day of each course is spent travelling (usually by train) to Aviemore. For some reason young people embarking on pre-Service courses are immediately identifiable. Perhaps it is the youth they all share, or the apprehension, or the luggage labels or just the fact that they are the only ones on the train so far north!

The Katana - commonly flown by flying scholarship candidates

Learning the essentials!

On arrival at Aviemore station scholars are met by an instructor from the Outdoor Activities Centre (OAC). The OAC is a stone building, in the middle of Grantown-on-Spey, converted from a former Drill Centre. And it looks like it! It is up the hill just a few hundred metres from the River Spey. The Centre is totally self-contained and belying its external appearance comprises classrooms, offices, dormitories, kitchen, dining room, wash rooms, washing and drying rooms and a store of all the most up-to-date outdoor and expedition equipment imaginable. For some 30 or so scholars this will become home for the next 12 days.

After the usual welcome briefings the course starts in earnest with breakfast at 0700 hrs on the following morning. The course members are then divided into two groups, and from then on, scholars find that they hit the ground running; participating in basic exercises in leadership, navigation and mountain safety, or signing out various items of kit and clothing. When it comes to kit issue, it is important that the clothing fits, and that the boots are comfortable! In the evening there are more briefings from the staff. Later on in the course each student has to prepare and present a 5-minute talk, so most pay particular attention to the techniques employed by the instructors!

At the end of the first day, most scholars are already exhausted, but by 0815 on the next day they will be on a bus bound for Loch Morlich to learn the basics of canoeing, or for the mountains to enjoy a little basic scrambling and climbing. Canoeing takes place in kayaks and the intention is to teach the scholars sufficient skills to be able to cope with a river expedition down the Spey. It includes direction keeping, mobility and capsize procedures. One thing is certain; everyone, including the instructors, gets soaked; but wearing a wet-suit keeps you warm! The mountain skills include a 'ridge scramble' in the Cairngorms, and it is far from a 'walk in the park'! The ridges are often sheer in places, requiring lots of basic climbing and at times, steady nerves! Even those who have climbed before and who consider themselves to be really fit regard this as a pretty demanding activity. Rock climbing is also carried

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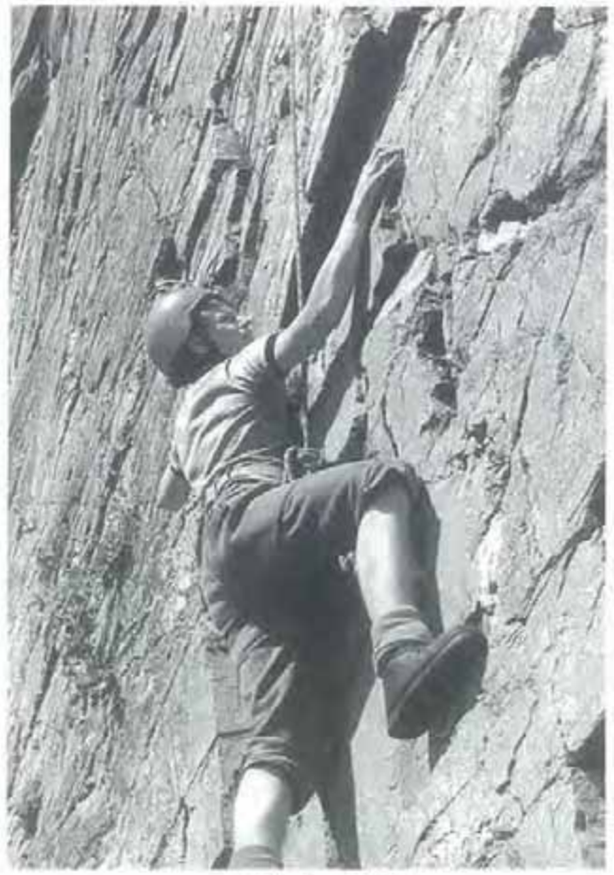
March 1997 - Scholarship Scheme (1b)



What handhold?

out on the coast to the north of Grantown. Depending on the state of the tide, scholars learn to scale cliffs or even tackle a nearby sea stack, using most of the basic techniques, and of course the necessary safety equipment!

At the end of the first week the course join together for a weekend's expedition lasting from Saturday morning to Monday afternoon. The objective here is to bring together the skills and techniques taught earlier and to give scholars practical experience in leadership and teamwork under a certain amount of physical pressure. This should be of invaluable assistance in preparing them for the rigours of initial officer training; indeed, some say that the scholars' Grantown course is more demanding than that for the officer cadets! It certainly 'finds out' those who have come to the course unprepared in physical terms. Immediately prior to the expedition most of the scholars can be found on their knees praying for fine weather, but those of you who are familiar with the highlands of Scotland will know that that is a relative term. At the start of the Expedition, scholars are transported to a remote part of the highlands and are dropped off in small groups about 7 - 10 kms from their designated campsite. The route to the campsite, or base camp, will have been pre-planned, but predictably, the walk is hard and uphill! It is not made any easier as result of having to carry a pack weighing up to 50 lbs. Having arrived at the campsite, tents are pitched hurriedly and the group then depart in supervised groups for a 4 - 5 hour 'walk' around the local area; without the encumbrance of backpacks this walk is a breeze!

Each scholar is given the opportunity to lead the group during the expedition. However, for most of the time they will be acting as team members or supporters of the leader. It is a fact of life that whilst most of us emphasise the officer's role as a leader, the bulk of his, or her time in RAF service will be spent as a team worker or supporter. The Sunday is the main excursion day, with groups away from the campsite for up to 10 hours. Typically they would expect to scale 4 or 5 Munros (mountains over 1000 metres) depending on the local geography, before returning for a welcome 'cook-up' back at the base camp. The following day the camp is struck and scholars walk out to the bus rendezvous. Although not quite as arduous as the walk-in, the walk-out is still pretty tiring, and the sight of the bus more than welcome! The expedition is the single most tasking element of the 'Grantown experience'.

After the expedition the scholars prepare for the river trip down the Spey. This is a 15 mile run through all sorts of river conditions including lots of fast-flowing rapids, the most notorious of which are known as 'capsize corner' and the 'washing machine'. This is an excellent day out, incredibly demanding on the shoulder muscles.

After the river trip the scholars return to Grantown to clean up prior to their station visit to Kinloss or Lossiemouth. The visit is designed to further their interest in the Service and to give them an overview of as many branches as possible. Additional activities undertaken during the last two or three days include mountain biking over a course fairly near to the Centre and sometimes, depending on the time of the year and the weather conditions, skiing at Aviemore. Half a day is devoted to some aspect of community service in Grantown, and with the end of week two in sight, scholars are only too delighted to hand all their kit and equipment back to stores!

Expedition basecamp - but the weather is not always as kind as this!

Scholars return home on the second Friday and sleep for most of the train journey. For many of them this will be the first time they have come to the end of a week absolutely exhausted; but without exception, they all say it was worth all the effort.

While the financial element of the Sixth Form Scholarship is undoubtedly a positive incentive to its recipients, the two weeks spent at Grantown-on-Spey is arguably the most valuable experience that most candidates will have had so far in their lives. It is the first time most have had to fend for themselves and cope with an extremely rigorous and demanding daily regime at the same time. Nevertheless, most push themselves to limits they never thought they would reach. It is a credit to the staff of the OAC that the vast majority of scholars leave Grantown better prepared, and more confident in their own ability to cope with Initial Officer Training, and subsequent life in the wider Royal Air Force. And it is not uncommon to hear scholars, on the final day at OAC, saying " I know it's all over now - but I really don't want to go home!"

Canoeing down the River Spey

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March 1997 - Physical Education (1a)

PHYSICAL EDUCATION AT THE RAF COLLEGE

Squadron Leader R D Gammage BSc, OC PEd Sqn, RAF Cranwell

The 1996 German Games Opening Ceremony

1996 has been a highly successful year at the RAF College for Physical Education participation and sporting achievement. The College sports teams have performed very well and some creditable results have been achieved, particularly by the RAF Women's teams. This year's Lowe-Holmes Award was won by Sergeant R. Payne for his excellent efforts at athletics.

Once again, many sportsmen and women have gained representative honours, with 14 personnel selected to represent the Combined Services, while 69 individuals have represented the RAF at a variety of sports. College Sports Colours were successfully reintroduced this year and have proved to be a great source of inspiration to the student fraternity. The further improvement of quality sporting facilities has been given a high priority, with the upgrading of East Camp Gymnasium, development of the Sultan Qaboos Pavilion's facilities, and agreement to extend College Gymnasium and construct an artificial turf sports pitch. During the spring a College party visited the French Air Force Centre de Montagne at Ancelle to engage in a wide variety of adventurous activities. The College mounted expeditions, both home and abroad; most notably to the Alps, Himalayas, New Zealand and Malawi. The RAF-wide mandatory fitness test, introduced in 1994, for all personnel under 50 years, has continued to motivate large numbers of those who formerly would have taken little exercise and it is now likely that the tests' modest standards will be increased in April 1997. A successful Fitness and Health Day was held during September, attended by large numbers of Cranwell Service and civilian personnel and their families. Additionally, the College has accepted the new physical training tasks inherited from RAF Finningley, RAF Scampton and RAF Newton, which have increased the scope and diversity of activities carried out by the Physical Education Squadron. The greater number of students on the Campus has had a positive effect on the quality and diversity of College sports teams. As part of the welcome for new DIOT Courses, 'Freshers' Fairs' are now held and prove an ideal opportunity for OIC College Sports to identify new talent.

COLLEGE SPORT

Intercollegiate sport has been particularly successful with major Intercollegiate Games against Ecole de l'Air at Salon de Provence, Offizierschule Der Luftwaffe (OSLW) and the Royal Dutch Military Academy at Cranwell, in addition to the traditional Winter Games against the Britannia Royal Naval College (BRNC) and the Royal Military Academy Sandhurst (RMAS) at home. Furthermore, the College Sailing Team participated in the Hodgkinson Bowl Sailing Competition held against BRNC and RMAS at Dartmouth during June. Fortunately, the 1996 Combined Summer Games did not coincide with the Old Cranwellians' Association (OCA) Games, and Cranwell was therefore able to enter for the first time.

Having been heavily defeated by RMAS before Christmas, the College winter teams trained intensively during January in their build-up to the first major domestic Intercollegiate Games of 1996. They travelled by air to Marseilles during early February for the annual fixture against Ecole de l'Air. Although still short of quality players, the College Basketball Team had trained hard under the expert guidance of their Officer in Charge, Flight Lieutenant Stuart McInroy. Several well-rehearsed offensive plays had been developed, along with a coherent defensive structure, utilizing the 'Fast Break' concept as often as possible. Both teams appeared unsettled, but evenly matched, at the outset; however, the French quickly gained the upper hand. Their tall players, 2 of whom were over 6' 4", dominated partly through height, but also through better individual skill and their clear ability to plunder points by following up rebounded shots when in offence, whilst denying the College a similar luxury when in defence. During the second half, the French sides' utter domination continued as they displayed 'exhibition style' play. Final score - RAF College 25, Ecole de l'Air 101. The Cranwell Cross-Country Team included ladies for the first time in Salon. In unusually mild weather, the Men's Race was convincingly won by Flight Lieutenant Jules Dazeley, who finished with a blistering sprint, despite being over one minute ahead of his closest rival. The French claimed the next few places and eventually won by one point overall in this combined (men/ladies) scoring event. The ladies' race had been particularly competitive, with Flying Officer Jenny Pratt achieving an individual second place. The conditions for Rugby were perfect for the fast and open play that the College side hoped would provide them with the opportunity to achieve an unprecedented back-to-back victory against the French. Although Cranwell scored an early try, courtesy of excellent back play, ill discipline gave the French 4 penalty opportunities, all of which they fortunately missed. The second half dominance of the College forwards was rewarded by an excellent try from man of the match, Acting Pilot Officer Jim Thorp. Cranwell went on to win 22 - 8.

The College Basketball Team reached new heights in 1996

The first domestic Games of 1996 were at home against BRNC in March. Both men and ladies' Cross-Country teams included runners who were relatively new to competitive running. This, added to the inclement weather on race day, was not conducive to fast times. Nevertheless, the gutsy College teams tackled the stiff easterly wind with characteristic physical and mental determination. The leading Cranwell runners used the home advantage to good effect, gradually increasing their pace to split up the leading pack after about 3 miles of running. Aggressive front running by Student Officer Julian Rolfe enabled the top Cranwell athletes to pull away from their Navy rivals and to produce a well-deserved victory. The ladies also

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March 1997 - Physical Education (1b)

The successful College Netball Team

won convincingly, led home by event winner Student Officer Deborah Haxton. In the first quarter of the Netball Match Cranwell took control of the play to achieve an early 15 - 9 lead. As the match progressed, so too did Cranwell's confidence and enthusiasm; they achieved an entertaining 59 - 31 win. Despite the blustery conditions, both Rugby teams endeavoured to play an open game. From the outset, Cranwell ran the ball at every opportunity, the College pack dominating proceedings with good rucking and ball retention. At the half time whistle the score line read College 20 - BRNC 0. In the second half the Navy side displayed great commitment to keep the College pinned down in their own half. Although BRNC monopolized possession, they could not score and the final score remained at 20 - 0. A sizeable College Football Stadium crowd saw Cranwell settle in early and grab the lead through a well-taken goal by Flying Officer Green. Although the Home side led 2 - 1 at half time, they were unable to sustain the lead in the second half and Dartmouth well deserved their 3 - 2 win. The College Squash Team had been the only College side to beat Sandhurst a few months earlier and therefore approached their match with justifiable self-confidence. The match resulted in another convincing victory (5 - 0) for the College, who had now not lost a match in 2 years. In Men's' Hockey the College side was well-prepared and brimming with skill and a wealth of experience. Although, early on, the College made many penetrating runs, they were always cut off by Dartmouth's resolute defence. The College's unnecessarily over-complex skills enabled the Navy side to press forward with simple 'pass and support' hockey which resulted in them scoring after only 8 minutes. BRNC held this lead until the final quarter of the game, when Cranwell finally realized that they needed to change tactics. They achieved this and soon produced excellent passes and stops at speed. An equalizer was followed up by a Flying Officer Richard Kellett goal in the last 2 minutes to see Cranwell sneak home for a narrow victory. Cranwell won the Games with an overall result of 25 points - 5 points.

In late April the College hosted the Royal Dutch Military Academy to an entertaining weekend of sport and cultural events. The Cross-Country event saw an 8-strong men's team and a 6-strong ladies' team tackle their Dutch rivals. The warm and sunny conditions were conducive to racing and a southerly breeze provided welcome relief. The Ladies' Race was won convincingly by Student Officer Deborah Haxton, followed home by Student Officer Diane Elliott, and the Men's Race was won

Diane Elliot placed second against the Royal Dutch Military Academy!

by Student Officer Julian Rolfe. The strength and drive of the team's efforts secured an impressive 45 - 84 win. The College Basketball Team hoped that their recent emphasis on fast breaks would enable them to disrupt the taller, more skilled Dutch. In an exciting and evenly balanced first half the Dutch managed to stay ahead by 23 - 19 points, albeit primarily as a result of wasted attacking chances by the College. The College's attempt to use a combined half-court press and man to man pressure defence proved to be a tactical error. Although many turnovers were created, the play left gaps in the College defence which were eagerly exploited by the Dutch. A point scoring spurt by the Dutch giants, Hellemons and Froklage, enabled them to win 56 - 36. Nevertheless, this was an encouraging performance by the College players who had fought hard against talented and experienced opponents. At Rugby the College demonstrated their utter domination of the Dutch by leading 50 - 0 at half time, a score they more than doubled at the end. The Dutch are enthusiastic amateurs at this sport; if we wish to retain this fixture, it is essential that the College is represented by a more modest and balanced team in 1997.

During June the College Teams entered the Combined Summer Games versus BRNC and RMAS at Dartmouth. In previous years this event had coincided with the annual OCA Games, hence this was the College's first participation in this combined event. Glorious weather blessed the proceedings, typified by the splendid conditions at Dartmouth Golf Club. The first golf match gave College Captain, Officer Cadet Harrison, an opportunity to demonstrate his prowess on the tight Dartmouth Course. His competent display was supported by impressive second and third string players. However, the stronger wind later in the day upset the College's lower order players and they eventually placed one point down on RMAS in third place. The Swimming event featured men's and ladies' races, plus a waterpolo match. All events were fiercely competitive, with the Cranwell Team giving a creditable account of themselves. They placed second behind a strong

The College Soccer Team fought hard for the equaliser against tough German opposition

RMAS Team in both the races and the waterpolo. The Sailing event for the Hodgkinson Bowl was held on the River Dart Estuary using Laser Two dinghies. Infamous for difficult sailing conditions, strong winds and awkward tides, the River Dart did not disappoint. The 6-race match featured aggressive tactics from all 3 teams, with the College sailors rotating crews to make best use of weight and tactical experience. After 6 races all 3 teams were drawn and it was decided that the last race would be sailed with each team represented by 2 boats. This race was incredibly close with the lead exchanging several times in a matter of minutes. BRNC won by $^1/_2$ point from the College's representatives, Flying Officers Simon Ling and Nicky Donaldson. At Volleyball, the Cranwell Ladies were unable to match their training record and, although the games were all close, they placed a disappointing third. The Tennis Team went into the event in confident mood, following several weeks of intensive practice on the College Courts. They performed well to finish in second place behind a fine BRNC team. The College Clay Pigeon shooters once again proved much too strong for their Army and Navy opponents and produced a comfortable overall victory. The Cricket Competition was reduced to a 6-a-side event due to BRNC and RMAS having other matches on the same day. This gave the College a great advantage, which they exploited to the full in some extraordinary games of cricket. For example, in the College's match against BRNC the fast, accurate bowling from Student Officer Howard Parr saw BRNC bowled out for 19 runs! The College went on to secure a memorable victory. The overall final score was BRNC 15, RAF College 14, and RMAS 13 points.

The annual cricket match versus Adastrians Cricket Club was played at Vine Lane in late April. The Adastrians won the toss and elected to bat on a flat, lifeless wicket. It soon became evident that the opposition had fielded a particularly strong batting line-up and that this, combined with the pitch, would make wicket-taking difficult for the College bowlers. After $4^1/_2$ hours at the crease, the Adastrians declared, setting Cranwell a target of 274 to win. Regrettably, it soon became evident that the College was unlikely to win the match and they therefore set about playing for what would be a difficult draw to attain. Albeit the upper order batting collapsed, dogged defence by Student

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March 1997 - Physical Education (1c)

College Sports Colours *awarded to*

Flight Lieutenant Jules Dazeley	Cross-Country
Flying Officer Simon Cloke	Rugby
Flying Officer Stuart Coffey	Rugby/Basketball

The AOC & Commandant presents College Colours to Stuart Coffey for Basketball and Rugby

Flying Officer Richard Kellett	Hockey
Flying Officer Howard Parr	Cricket
Flying Officer Simon Race	Rugby
Flying Officer Chris Snaith	Rugby
Flying Officer Mike South	Cross-Country
Flying Officer David Stewart	Hockey
Flying Officer Paul Wyatt	Basketball
Student Officer Steve Clapp	Football
Student Officer Hazel Hood	4 Sports

RAF Inter-Station Competition
Notable successes for College teams in Inter-Station Competitions included:

RAF

Athletics
Runners-up in RAF Inter-Station Competition.

Canoeing
Winners in EMCL Winter Series.
Winners in RAF Inter-Station Slalom Competition.

Cricket
Runners-up in RAF Inter-Station Cup.

Cross-Country
Winners in RAF Road Relay Competition.
Third in PTC Cross-Country Championships.

Equitation
Winners in PTC Championships.

Gliding
RAF Cranwell Gliding Club won the Inter-Services Gliding Competition.

Lawn Tennis
Winners in RAF Inter-Station B Cup.

Swimming/Water Polo
Winners in PTC Water Polo Championships.
Winners in PTC Team Swimming Competition.
Runners-up in RAF Inter-Station Relay Championships.
Semi-finalists in RAF Water Polo Championships.

Table Tennis
Winners in RAF Inter-Station Championships.

Volleyball
Winners in Lincs League Competition.
Runners-up in Lincs League Cup.
Winners in Faville Trophy.

RAF Women

Athletics
Runners-up in RAF Inter-Station Competition.

Canoeing
Winner in RAF Inter-Station Slalom Championships (Individual) - Sgt Young.
Runner-up in RAF Inter-Station Championships (Individual) - Flt Lt Johnson.

Cross-Country
Winners in PTC Championships.
Winners in RAF Inter-Station Championships.
Runners-up in RAF Road Relay Competition.

Equitation
Winners in PTC Equitation Championships.

Swimming/Water Polo
Winners in PTC Team Swimming Competition.
Winners in RAF Inter-Station Relay Championships.

INDIVIDUAL SPORTS REPRESENTATIVES 1996

Angling
MAEOp Vongyer - RAF
Flt Lt Payne - RAF

Athletics
Sqn Ldr Gammage - CS, RAF and Team Manager.
Flt Lt Coyne - CS, RAF.
Fg Off Ingram - RAF.
Plt Off Wills - RAF.
OC Booth - RAF.
OC Elliot - RAF.
OC Haxton - RAF.
Sgt Payne - CS, RAF.
Cpl Prestwood - RAF.
Cpl Southern - RAF.
SAC Paine - CS, RAF.
SAC Thompson - RAF.

Badminton
Flt Lt McKenzie - RAF.
Plt Off Hood - CS.
Sgt Metcalfe - RAF.

Basketball
Flt Lt Claringbould - RAF.
Fg Off Wyatt - RAF.
SO Westbrook - RAF.
OC Heede - RAF.
Sgt Swarbrick - RAF.

Canoeing
Flt Lt McDonald - RAF.
Cpl Goodsell - RAF.

Cricket
Fg Off Riddell - RAF
Fg Off Catlow - RAF
OC Harris - RAF U25.
Cpl Chapple - Comd.
Cpl Goacher - RAF.
Cpl Spray - RAF U25.
SAC Gray - RAF U25.
SAC Myers - RAF U25.

Cross-Country
Flt Lt Dazeley - RAF.
Sgt Payne - RAF.
SAC Paine - RAF.

Cycling
Sqn Ldr Daniels - RAF.
Cpl Kaye - RAF.

Equitation
Sqn Ldr Faulkes - RAF.
Flt Lt Rosier - Comd.

Football
Cpl Dawson - Comd.
SAC McIntyre - Comd.

Gliding
Sgt Crocker - Comd.

Golf
Sqn Ldr Griffith - RAF Ladies' Individual Golf Champion.

Hockey
Sqn Ldr Griffin - RAF.
Flt Lt Parry - RAF.
Fg Off Gibson - RAF.
Fg Off Kellett - RAF.
Cpl Simpson - RAF.
SAC Dykes - RAF.
SAC Midgley - RAF.
SAC Nash - RAF.
SAC Orton - RAF.
SAC Watts - RAF.

Judo
Fg Off German - RAF.
SAC English - RAF.

Lawn Tennis
Flt Lt Doherty - RAF.
Sgt Swarbrick - RAF.

Motor Sport
Cpl Edwards - RAF.
Cpl Kenny - RAF.

Netball
Cpl Weir - Comd.

Road Racing
Flt Lt Coyne - RAF.
Flt Lt Dazeley - RAF.

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March 1997 - Physical Education (1d)

Flt Lt Gilbert-Simpson - RAF.
MALM Watts - RAF.
Sgt Wilson-Evans - RAF.
Sgt Payne - RAF.
Sgt Young - RAF.
SAC Paine - RAF.

Rowing
Flt Lt Berry - RAF.
Fg Off Hunter - RAF.
Cpl Smith - RAF.

Rugby
Flt Lt Burn - RAF.
Flt Lt Cairns - RAF U21 Coach.
Flt Lt Lamb - RAF Coach.
Fg Off Cloke - Comd.
Fg Off Coffey - Comd.
Fg Off Marter - Comd.
Fg Off Race - RAF.
Fg Off Scourfield - Comd.
Plt Off Everett - Comd.
Plt Off Nelson - Comd.
Plt Off Parr - RAF.
SO Thorpe - RAF.
OC Matthews - Comd.
Cpl Grindrod - RAF.
Cpl Hermond-Halgh - RAF.
Cpl James - RAF.

Sailing Offshore
Flt Lt Blake - RAF.
Flt Lt Rossiter - RAF.

Sailing Yacht Racing
Sqn Ldr Chilvers - RAF.

Skiing Alpine
Sqn Ldr Mutch - RAF.
WO Palmer - RAF.

Squash
Cpl Goodings - Comd.

Swimming/Water Polo
Flt Lt Bauer - Comd.
Flt Lt Buchanan - RAF.
Flt Lt Smart - RAF.
Flt Lt Wilson - RAF.
Fg Off DOnaldson - Comd.
Fg Off Hamilton - RAF.
Plt Off Ansell - Comd.
OC Barry - Comd.
OC Chesworth - Comd.
OC Higgins - RAF.
OC Leevers - RAF.
Sgt Murphy - RAF.
Cpl Davies - RAF.
Cpl Goodings - Comd.
Cpl Grindrod - Comd.
Cpl Hamer - CS, RAF.
Cpl Simpson - CS, RAF.
Cpl Southern - RAF.
Cpl Watts - RAF.
Cpl Williams - RAF.
SAC Murphy - Comd.

Table Tennis
SAC Buck - RAF.
SAC Oldman - RAF.

Volleyball
Sqn Ldr Leighton - RAF.

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DEFENCE COLLEGE OF AERONAUTICAL ENGINEERING (CRANWELL) MARKS THE BEGINNING OF A NEW ERA IN THE TRAINING OF RAF ENGINEER OFFICERS

by Wing Commander Andy Tait
Officer Commanding Defence College of Aeronautical Engineering (Cranwell) & OC Future Engineer Training

Reporting to the Headquarters of the Defence College of Aeronautical Engineering (DCAE) at Cosford, DCAE (Cranwell) was formed in April 2004 from the engineering training elements of the Department of Specialist Ground Training (DSGT) at RAF Cranwell. Following the disbandment of DSGT in November 2004 DCAE (Cranwell) also took on responsibility for supporting those other elements of engineer, supply and logistics training at Cranwell now owned by the Defence College of Logistics and Defence College of Management and Technology.

The main task of DCAE (Cranwell) is to provide initial specialist training for all RAF engineer officers at the start of their careers, and to prepare them to take up their first productive appointments. Since April 2004 some 270 officers, including 17 from other nations' air forces, have graduated from DCAE (Cranwell) to tours across the RAF, or to return to their own Services, having successfully completed the 31-week Engineer Specialist Training (EST) course. The course prepared junior engineer officers for the twin challenges of holding responsibility for maintenance and repair of the RAF's aircraft and equipment, and of commanding large flights of up to 100 technical personnel. In order to do this it covered not only technical subjects, but also a great deal of management, general service and personnel management training, and used a variety of scenario-based exercises to give students the chance to practice their skills in simulated engineering environments.

The EST course, and its predecessor Engineer Officer Training (EOT), have served both sides of the Engineer Branch well for some 19 years now, with many improvements along the way, but it has been clear in recent years that a fundamental revision of

initial specialist training for engineer officers would be needed. Both a greater urgency and a window of opportunity for this change were provided by the recent overhaul of Initial Officer Training at RAFC Cranwell: the temporary reduction in the numbers of students entering Phase 2 training and the revised IOT syllabus meant that an overhaul was not only desirable but essential. Therefore, in June 2005 DCAE (Cranwell) formed a small Future Engineer Training (FET) team to focus dedicated effort on the requirements for a new training course, and to design, develop and coordinate the work needed to make it happen.

Before 'The New Course'

The first major task was to identify exactly what this training was preparing people for. The many 'change' programmes occurring across the Military Air Environment, have resulted in a lot of learning tours being either 'leaned out' or filled by contractors. The upside of this is that there will be an increased number of operationally focused tours as a percentage of the available 1st/2nd tours but in consequence we now need to ensure that 1st tourist EngOs hit the ground running (or at least walking reasonably quickly!). The BECAMS Study and the Engineering Branch Sponsor (EBS) had already done much of the work required in this area and the first outcome was a collection of "Foundation" posts within which 1st and 2nd tourists would effectively 'cut their teeth' as engineer officers (EngOs). The essential elements of a Foundation Tour are considered to be the following:

- Warfighting and Operational Focus - through early employment in warfighting organisations.
- Leadership - through relevant Flt Cdr tours.
- Service Ethos (understanding the air perspective of military operations) - through employment in core air activity.
- Professional roles - through employment in core Branch activities.

Whilst not all initial tours would contain each of the requirements above, the aim was that any deficient areas could be taken up within the subsequent tour to ensure that all EngOs finished their 2nd tours having sufficient experience in each area. The final output from this work, in collaboration with STC and Gp staffs, was the identification of 2 distinct lists of 'Foundation' tours: Aerosystems for aircraft, avionics and armament-based posts and Communication Electronics (although this title may change) for those working within the communications and information systems (CIS) world.

These lists were then used by FET and STC staffs to identify the tasks and sub-tasks that would be carried out within Foundation tours and thus create what is known as an Operational Performance Statement (OPS). As we progressed it became increasingly obvious that, whilst we share the word engineer in our titles and use many of the same philosophies, the AS and CE streams carry out considerably different tasks to the extent where, with the exception of some core policy and leadership/ management elements, 2 distinctly different OPSs were required. This strengthened the case for the creation of 2 separate courses with common elements, rather than a having a common course with some streaming. Hence 2 new Engineer Officer Foundation Training (EOFT) courses, Aerosystems and Communications Electronics, were born.

Fundamental to the design of the 2 courses was their size and frequency; for example, classroom sessions or situational exercises need certain numbers of participants if they are to be successful, particularly when using, large, complex and expensive instructional aids. The courses have been optimised

around the predicted throughput for the next 5 years with the capability to flex as necessary. In order to reduce the pipeline time to zero and use the DCAE Cranwell resources better, it was decided to adopt the new IOT 'semester' system of 3 x 10 week terms running concurrently with a week off between each term (see figure below). As well as providing greater visibility of resource requirement, this provides our students with regular breaks, which in turn allows them to use their annual leave allowances under training rather than hitting front line units with large amounts of accumulated leave.

The EOFT Courses

There are 2 major constituent parts to any training package: the delivery of training and the assessments that test whether or not the training has been assimilated. Whilst there were practical exercises and scenario based tests within EST, these were late in the course and became the major stumbling block for our students as many struggled to bring together all that they had learnt over 23 weeks. To overcome this there have been fundamental changes to the philosophy of the new courses; the ethos is now to constantly build and reinforce knowledge rather than the previous modular (or stove-piped) system which, when combined with an examination-heavy testing methodology was found to be encouraging students into a 'learn and dump' mentality. Each course has addressed this new ethos in a slightly different way, but they are consistent in that they both place an emphasis on learning, consolidating and testing through a blended approach. Each term aims to blend instruction in technical and management subjects with reinforcement and regular consolidation through exercises and tutorials.

These have been adopted to enable the students to develop their technical and people skills in parallel, and to try out and refine these skills in increasingly

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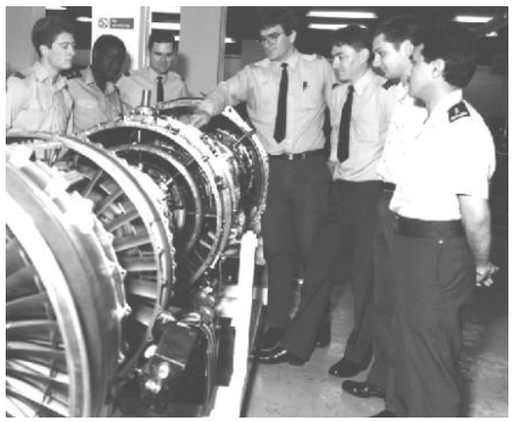
complex scenarios to present students with simulated challenges as close as possible to those they will encounter in their foundation tours. For instance, 'problem based learning' (adapted from methods employed within the Graduate Entry Medicine course at the University of Nottingham) involves giving the students a realistic problem and then the means to resolve this problem are gradually introduced and explored over the following days through lectures, tutorials and practical sessions as necessary.

The management elements of the courses are common for officers destined for either the Aerosystems (AS) or Communications-Electronics (CE) specialisations of the Engineer Branch (and indeed are almost identical to those required by the Supply branch), but each group concentrates on their own range of technical subjects, whether aerodynamics, aircraft systems, engines, avionics and weapons for AS, or information systems, communications networks and radar and command and control systems for CE. In either case the aim is to train officers already qualified to HND, or more likely degree, level in an engineering discipline how to use their professional skills and knowledge to support and manage the RAF's equipment, and thus to provide commanders with the engineering effort needed to produce, deploy and apply Air Power. Following another lead from the new IOT course, and responding to student feedback, there is now a great deal more interaction between students and the JNCO/SNCOs on the staff at DCAE (Cranwell). This serves 2 purposes: primarily it gives real exposure to the expertise and capabilities of their subordinates but a secondary benefit is that, as potential leaders of some of the largest sections in the RAF, the students are being given an opportunity to practise and develop styles of personnel management and leadership in a relatively benign environment.

Ultimately tests have to be carried out to ascertain whether or not the students have the ability to successfully apply the knowledge obtained. As with many RAF training modules, the students' performance is constantly being monitored and then formally assessed within structured tests. Where the EOFT courses differ from many others is that they prepare the Officers for their future appraisals by assessing them against the 10 OJAR skills and qualities, using the same grades and descriptors (A, A-, B+…….D) that their whole careers will be judged against (and their subordinates following the introduction of the SJAR in 2007!). In order to achieve this, each of the tests has been arranged to contain elements of one or more of the OJAR skills and qualities. At the end of each term all of the individual performance scores are combined in a matrix to identify the overall levels. As well as providing a broader assessment of the students' capabilities, this system also allows for the bad day (or hour) at the office to be considered against all other performances to date and provides the student with a fairer benchmark of their overall performance. Both new courses contain a 2-day assessment carousel at the end of Term 1, a 4-day situational exercise in Term 2 and and a lengthy final consolidation and testing session within Term 3 (3 weeks for AS and 2 weeks for CE).



Final Assessment

Set during weeks 24-26, the Term 3 Assessment looks to bring all of the elements of training together in a consolidation and assessment exercise during which the AS course fill officer roles in support of a squadron of 5 Jaguar ground instructional aircraft, carrying out all the tasks necessary to maintain and 'fly' the aircraft, and to deploy and recover No.284 Sqn. At the same time, the CE course will be carrying out their own independent exercise (linking with AS where possible) to run a small flt and deal with all of the information requirements of a moving deployment and manage all of the associated communications equipment and information systems. Both courses will be constantly monitored using a combination of CCTV and embedded staff in the subordinate roles.

The final hurdle to clear for all students is an oral examination board at SO1 level. For the AS students this is meant to be a generic representation of the interview that they will face from OC Forward Support on their units before the award of any level G authorisations; from the CE perspective this interview is meant to demonstrate their depth of knowledge and prove their competence as a engineering decision maker.

After 18 months effort and development, the results of the redesign efforts, and of the work and contributions of all in DCAE (Cranwell) and across the RAF's engineering community, are now about to bear fruit with the first 14 officers, including 11 engineers graduating from the first of the new IOT courses, who started on No 1 EOFT (AS) and No 1 EOFT (CE) courses on 31 Jul 06, graduating to their foundation tours on 15 Mar 07.

The photographic montage below has been created for DCAE (Cranwell) by the Serco Media Services department at Cranwell to mark the transition to a new era in the training of engineer officers for the RAF. It shows nearly all of the 131 staff and students at DCAE (Cranwell) in May 2006, together with 2 of our Jaguar ground instructional aircraft (they don't fly, but they can do everything else that an active aircraft can), a Marconi Off-the-shelf Satellite Terminal (MOST) used to practice deployment of communications equipment, and DCAE (Cranwell)'s main training locations at Cranwell – Trenchard Hall, and the Aeromechanical Systems Building and Aircraft Hall at the Rauceby Lane site. Although future steps in the development of the Defence Training Review may well see DCAE (Cranwell) move to a new location as part of a wider Defence Technical College, the work done to create and implement the EOFT courses will mean that until then, and beyond, the RAF's engineer officers will receive the highest quality, and most up-to-date, training to prepare themselves for their challenging careers in the Service.

Marconi Off-the-shelf Satellite Terminal

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Through Service Professional Development

Group Captain P J Sagar MBE RAF, Officer Commanding Generic Education and Training Centre

The Generic Education and Training Centre (GETC), under the guidance of Gp Capt Phil Sagar is the Training Requirements Authority for all generic training & education across the RAF. It is responsible for the Professional Military Development (Air) (PMD(A)) Programme which is the generic professional military education & training programme for officers and airmen endorsed by the Air Force Board. The GETC currently has teams working in the areas of Leadership, Air Power, Generic Training, electronic-learning (e-learning) and Force Development (FD) / Adventurous Training (AT) and will expand in early January 2012 to incorporate Human Factors training.

The curriculum for PMD(A) is articulated in the Generic Education and Training Requirement (GETR); a competency based framework covering 8 core competencies: Air Power, Leadership, Management, Communications, Ethos & Heritage, Military Skills, Force Protection and Organisation. For each core competence, the GETR specifies the sub-competencies and the minimum performance requirements, or effective indicators, by rank from Aircraftsman to Wing Commander. The GETR states the knowledge and skills to be acquired during a Service person's career, how and at what stage they should be delivered and is accessible via the Defence Intranet and internet on the World Wide Web. These 8 core competencies are delivered through a blend of residential courses, e-learning and FD delivered on Station.

There has been much work done to align and improve the various residential courses for both officers and airmen. However, much more of a Service person's time is spent on a Station than on residential courses so FD is crucial in ensuring that what is learnt on courses is contextualised to the individual's unit and remains current throughout a Service person's career. FD aims to improve operational effectiveness through a combination of individual and collective knowledge, training and skills across the 8 core competencies. FD encompasses any GETR aligned unit planned activity such as AT, Staff Rides (SRs), Green Days, leadership exercises, Air Power presentations and sport. These activities can be blended to simultaneously target a range of GETR competencies, through a variety of training media. For example, a SR can be undertaken alongside a physical activity, leadership exercise or team building event. AT contributes significantly to personal development in the areas of robustness and resilience, risk awareness, leadership and team work – all priorities for the operational effectiveness of the RAF. AT can be planned, organised and delivered through various Physical Education led channels: the centralized FD and AT activity 'EAGLE' Scheme, the FD Training Centres, Station / Unit minor and major expeditions and Joint Service Adventurous Training Courses.

The FD and AT Implementation Strategy was endorsed by the Air Force Board in September 2011, with funding being made available for the centralized EAGLE Scheme. The EAGLE Scheme's primary target audience are those personnel who have no or limited experience of AT, organised sport and SRs and those Formed Units utilising FD and AT as pre and post deployment training. The scheme's exercises are an introductory package to both, which will hopefully foster further interest in the individual to go on and participate in a pure AT or SR activity. The Eagle Scheme's exercises currently focus on participation in summer and winter FD and AT blended activities both at home and abroad, but new for 2012 are EAGLE exercises incorporating wider PMD(A) activities and material which are akin to that studied and delivered on SRs. For further information on any aspect of FD, particularly the EAGLE Scheme, personnel should contact their Station's FD Sqn, PEd Flt or the GETC website.

Team Building Activity Danesfield Watersport Centre.

Exercise Snow Eagle.

PMD(A) Online is the RAF's Virtual Learning Environment (VLE) which delivers elements of leadership and management courses for officers and airmen. A key task of the GETC is to develop appropriate content to ensure PMD(A) Online remains relevant, appealing and engaging to users; the portfolio of courses continues to expand, currently standing at 80. The PMD(A) Online Team are continuously engaged in the development of new courseware and are currently focussed on the People Campaign Plan objective to improve access to online courses for the whole Force, including reserves and civilians. They run regular training courses on course development and administration which has allowed PMD(A) delivery organisations (Station FD Sqns, Specialist Units and Technical Training Schools) to create their own distance learning courses on the site and engage with their students on PMD(A) Online. A current trial is examining the benefits of giving new recruits IPads that have been pre-loaded with relevant e-learning material.

As well as creating in-house leadership modules, the PMD(A) Online Team has worked with a number of contractors to introduce new interactive e-learning modules in subjects such as SRs, Mentoring, and Analysing and Communicating Effectively. The interactive SR package covers the history of SRs, as well as the principles and best practice of creating and running a stand. The module includes a video of an example SR stand presentation to consolidate student learning.

The Mentoring Management System is an internet based system to match mentors with mentees. It automates the process of matching and managing the mentor mentee relationship. In particular, mentors will help and encourage mentees to assess their own personal and professional needs, and to develop their career competencies.

On-line Mentoring Management System.

The PMD(A) Online team are also currently developing a Mission Command e-learning module and this should be available online in mid-2012.

The most recent development from the GETC Air Power Team has been the production of a Spotlight publication (edition 11-2) on Cyber. Engagement with the Development, Concepts and Doctrine Centre (DCDC) ensured that the Spotlight fused releasable elements of the draft operating concept with emerging government policy and information available in the academic environment. The aim was to provide some context and guidance for those delivering Cyber content at the Formal Training Establishments. The Cyber Spotlight, like its Space predecessor, provides specific rank related advice to training establishments, together with suggested lines to take. In addition the Cyber Spotlight provides discussion points, so that instructors can start syndicate room discussions on each of the 12 Air Power GETR areas. The Cyber Spotlight has been warmly received, particularly as an introduction to the issues surrounding Cyber activity and can be found on the GETC Defence Intranet site.

In July 2011 the first Virtual Leadership Conference was hosted on PMD(A) Online. This inaugural 'virtual' conference for the RAF was entitled 'Air Force Leadership in a Disconnected, Interconnected World'. During the 3 day period lectures and presentations were screened over the internet and a live online forum enabled conference attendees to pose questions. The flow of questions was extremely buoyant throughout the Conference, with the ability to interact with each presenter, 'live on-line', being a unique and highly impressive opportunity.

The Conference was introduced and officially opened by the CinC Air. The Conference then proceeded with 90SU's Tactical Communications Wing from RAF Leeming discussing NCO Leadership – Connecting the Disconnected, and the Thomas Telford School providing a case study of their experience of Leading Edge Learning using the latest technology. Day 2 saw Air Commodore Monkman giving his perspective of the Conference's theme in relation to current operations. The final day gave Wing Commander Hartford (PhD student of Leadership) the opportunity to discuss 'Panoptical Illusions' – Investigating the potential impact of NEC on Mission Command, and members of the Aeronautical Rescue Coordination Centre (RAF Kinloss) giving details of leadership in a Multi-Agency World. The final presentation was given by the Chief of the Air Staff, who also formally closed the Conference.

Air Commodore Monkman answering questions during the 'live' Question and Answer forum.

Mission Command e-Learning Package.

This unique RAF Leadership Conference was the first to give access to potentially all members of the Royal Air Force to join in and was very well received with an estimated 3000 participants over the 3 days, including those within the Diaspora and at out of area locations.

Planning for the next Leadership Conference is already underway which will have both an online and residential element.

King's College London, GETC's academic partner, is currently undertaking a Content, Coherence and Accreditation Review of the GETR. The aim of the Review is to assess the curriculum content of the GETR to ensure it is coherent across the PMD(A) programme and, where possible, align it with the Framework for Higher Education Qualifications. The review, which is due for completion in November 2012, will be carried out in three phases: Phase One - review the content in terms of academic level and competencies covered, Phase Two - check for coherency across the PMD(A) programme and Phase Three - recommend options for accreditation. The King's College London team will focus on the Air Power element of the GETR with further work on the other seven core competencies being conducted by GETC.

PMD(A) provides all ranks with coordinated generic education and training which will develop common levels of understanding in supporting the generation of air power. Through the GETR it ensures that the right mix of FD, residential and distance learning is delivered at the right time during a Service person's career. Station OC FD Sqns are the central point of contact for all career courses and will be able to provide advice and guidance on how to access e-learning material, apply for residential courses and participate in the many FD activities available.

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May 2013 - College 'LLL' (2a)

Officer Development & Education - The Evolving Challenge

Flight Lieutenant Stu Coffey MSc RAF, Junior Officer Development Programme, Joint Service Command & Staff College, Shrivenham

Flt Lt Stu Coffey has experience in the field of leadership and instructional duties. A C130-J Hercules captain by profession, he was a Flight Commander at the Officer and Aircrew Cadet Training Unit (OACTU) during the last of the old 24-week courses between 2003 and 2005, and was involved in trialling new exercises designed for the current course. A current instructor on the new Junior Officer Development Programme (JODP) - the replacement for the former Junior Officers' Command Course (JOCC), he has also completed the Intermediate Command and Staff Course (Air), [ICSC(A)], as a student. He has therefore seen all generic officer training prior to the Advanced Course. In this article, he discusses the through-service generic officer education and development, and how it adapts to meet the challenges of the present and future.

Transformational Leadership - we aspire to employ it. But what does it look like? How can we tell in the moment that one initiative is more transformational than another? In Churchill's wilderness years (between the World Wars) his vision of the growing Nazi menace, and his confidence to maintain a minority position in the face of almost unanimous disagreement across the political divide, demonstrated an ability to see the bigger picture despite the consequences. To truly transform an organisation from the top takes a similar level of steadfastness; a recognition that change is needed with a vision to achieve it, whilst understanding the culture that will enable that change to happen.

An old Chinese proverb reads "When the wind of change blows, some people build walls and others build windmills". This has been a truism of the Royal Air Force's professional development of officers over the last decade. The RAF has taken the opportunities afforded by the winds of change to shepherd in a new dynamic across generic officer development. At the turn of the century, Sir Peter Squires instituted a radical rethink of how officers were trained at Initial Officer Training. The remit was simple; start with a blank page. Nothing is sacrosanct and nothing too outlandish. Instead of simply adding extra to what went before, a full and detailed training-needs analysis took place to establish what behaviours and values needed to be inculcated in the officers of the future. Later, Sir Jock Stirrup and Sir Glenn Torpy encouraged the momentum to be maintained beyond IOT into the Junior and Intermediate staff courses. The RAF has, therefore, embarked on a redesign of generic officer development that is arguably the most innovative and comprehensive in its history, and this progression continues into the present day.

This article charts the changes that have been made to officer development in the RAF since the end of the Cold War from the perspective of someone who has been a recipient of the old and a deliverer of the new. It represents this officer;s experience-based opinion, and does not claim to represent policy or organisational intent.

Generic Officer Development in the 1990s

Generic officer development in the early 1990s consisted of 18 weeks at RAFC Cranwell as an officer recruit. When officers had completed their specialist training and first tours they then applied to undertake the Individual Staff Studies Course (ISSC), sometime between 4 and 12 years in the Service, following which they would be eligible to apply to complete the 3-week Junior Officer Command Course. Upon selection for promotion to the rank of Sqn Ldr, they would then complete the 4-week Intermediate Command and Staff Course (Air) [ICSC(A)]. This haphazard development regime resulted in periods of up to a decade between generic officer education interventions. Additionally, staff training was considered a stepping-stone to promotion - something that needed to be done to move on, rather than as a means to develop in the current rank. Later, if considered suitable for command, and officer would complete the 1-year Single-Service Advanced Course.

The contrast with the current system is stark. IOT now takes 30 weeks to complete, 14 weeks longer than 20 years ago. Newly graduated officers immediately join the generic education timeline that results in a residential intervention at the JSCSC every 2 years until 3 interventions are complete. The total residential time at the JSCSC for junior officers following the new JOD Programme is 4 weeks vice the single 3-week iteration (JOCC) that it replaced. The ICSC(A) was similarly extended to 8 weeks in 2007 from the former 4 weeks duration.

Advanced Course Development

Following the Defence Costs Study of 1994, and lessons learned process after the first Gulf War, PJHQ was opened by The Rt Hon Michael Heseltine in April 1996. One of the reasons for this development was to improve 'jointery' across Defence. Subsequently, in September 1998, the first Tri-Service Advanced Command and Staff Course began bringing the best of each Service together at an earlier point in their careers than hitherto, in an effort to further improve understanding between the Services and develop jointery at the command level.

Officer Recruit Training

This author joined the RAF just after a change in officer training had taken place after the end of the Cold War. The former 18-week officer recruit training programme had been replaced with an extended 24-week version incorporating more academic study and a distinct military skills section at the beginning to 'militarise' new recruits before they could progress to the 'main Squadrons' where they would be taught field leadership. However, the answer to the question was known before the solution had been decided: 24 weeks was the answer with the question being simply this, *"What extra training should be added to the existing 18-week course?"*

During his time at OACTU as a Flt Cdr, what became clear to the author was that the rationale and resources put into the new change from 2006, that was to become the new 30-week course, was indeed ground-breaking. No longer was an answer provided in terms of the length of the course and then a decision made to simply fill the extra weeks by extending the existing course. This new course design started with a blank piece of paper. Firstly, branches and all other stakeholders were asked to contribute what they wanted from IOT graduates. A comprehensive training-needs analysis was then completed to establish the requirement before designing a course to fulfil those needs. The lead-in time was extensive: The project had started before 2003 and the first course did not begin until 2006. The constraints were kept to the absolute minimum.

Since 2006, officer recruits have undertaken a 30-week course comprising three 10-week terms separated by periods of either leave or 'reinforcement' training. However, whilst this represents a 25% increase in the investment of new officer recruits, this simple fact hides the truly transformational nature of the change that started some 4 years earlier. In September 2003, the energy for the new IOT course was being supplied by Wg Cdr Dan Archer. Many at OACTU were sceptical because much of what was taught on the former IOT was being discarded or significantly altered. Staff believed in the product they were developing and found it hard to see past the seemingly wholesale changes being made to the system into which they had bought. However, the change witnessed by staff on the new JODP of this new breed of junior officer has been almost entirely positive.

A key element of this new IOT course included a graduation expectation following successful completion of the second term. This allowed yet-to-graduate 'officers under supervision' to attempt leadership in different ways to expand their leadership repertoire. This was called giving 'permission to fail' to achieve greater success. By having a developmental term following a positive assessment of their functional leadership ability, 'officers under supervision' could experiment in a safe environment where the only impact of failure would be on their peers rather than those under their command once they had left IOT as a graduate. This radical departure to a system whereby failure could be accepted and used as a tool to aid development took courage to introduce, support and maintain. It transformed OACTU's culture by empowering students to take ownership of their leadership style development whilst still in training, using peer-learning to great effect.

The result of the changes has been a cohort of junior officers who have a greater willingness to question the status quo. There have been reports that this has changed too far in that junior officers are less respectful of the chain of command. However, the Haddon-Cave report from 2007 indicated that more questioning should be encouraged if Risk Management is to improve in general and a recurrence of the Nimrod disaster is to be avoided: a constructive dissent model of junior officership is preferable to a model of destructive consent. This gives the impression that some are not comfortable with the questioning nature of this new breed of junior officer. However, in the author's opinion this is a classic generational cultural divergence. In the modern RAF, where responsibility is pushed down to the lowest possible level, all should expect to be challenged as to the rationale and efficacy of their decisions, and this should be considered as healthy debate and not insubordination.

Junior Officer Development Programme (JODP)

For the new (post-2006) cohort of junior officers, JOD 1, 2 and 3 are the residential developmental interventions undertaken nominally at the 2, 4 and 6 year points post-IOT respectively. These courses have been designed to continue the development of this new breed of free-thinking and intellectually engaged officer, and to instil a sense and expectation of continual professional development at an early stage of their RAF careers. Indeed, the new JODP that has replaced JOCC is different in many ways. Firstly, the course has only 1 element of formal assessment in the form of a 2500-word essay to be submitted directly to the university staff at the JSCSC following their last JOD course, JOD 3. The fact that the course is unassessed until this point gives the students the intellectual freedom to innovate and voice their opinions freely without fear of censure. Notwithstanding this, unsupported assertions and those opinions that lack depth are still challenged by peers, instructors and university lecturers alike. Indeed, students are required to work hard during each intervention with extensive evening work each night. Conversely, the lack of assessment has improved the quality of output by allowing quality to be dictated by the personal motivations of the students themselves. The driving force behind the quality output that is seen is the informal assessment by their peers and their sense of pride and professionalism. External validators comment that many of the presentations produced could equally grace higher courses such as ICSC(A) or indeed the Advanced Course.

Perhaps the most important element of the change in delivery from JOCC to JODP is the use of blended learning to make the most of the precious resource, the residential time away from primary roles. At the 18-month point between residential interventions, individuals book onto courses. This gives students 6 months to prepare and complete pre-course activity that typically equates to between 40 and 60 hours of pre-course reading and associated activity. Indeed many students arrive having spent upwards of 100 hours preparing for their courses. This results in students arriving for each course with deliverables pre-prepared. Because there is an electronic audit process, staff can check to see how much of the activity has been accessed on Professional Military Development (Air) Online [PMD(A)], by students to gauge their pre-course progress prior to the courses and then 'encourage' as required.

Groups have a lot of deliverables to perform once they arrive and so do not have time to catch up their 40+ hours of pre-work once they have arrived. Hence, it is not uncommon for students to realise upon arrival that they would be a burden to their group because they have ill-prepared for their course, voluntarily departing back to their home units, to come back another time and 'do themselves justice' among their peers. It has become a matter of pride to perform as well as possible on the JOD courses to leave with self-esteem either intact or enhanced, rather than to see the course as simply a hurdle to be jumped. Each course also involves post-course validation and further on-line activity in the 6 weeks following completion of a JOD iteration, be it a written brief to provide feedback on students' written communication skills or the essay at the end of the JOD programme. Therefore, no junior officer is ever more than 17 months from involvement in working towards their JODP completion within their first 7 years of service. By using pre and post-course activity in this way, the efficacy of the 4 weeks of residential work over the 6-year post-IOT continuum is magnified. Both of the other 2 services are in the process of developing their own online portal using PMD(A) online as a template.

Representative Timeline of Generic Officer Education.

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The academic level of output of the new JODP is higher than that of its predecessor. JOCC was validated by the Open University at Level 5. The JODP has recently been validated at Level 6 by the Institute of Leadership and Management. The benefit of repeated examination of subjects at successive interventions is demonstrated well by the leadership element of the Programme. JOD 1 starts with a facilitated discussion sharing experiences and pragmatic solutions to everyday leadership challenges. Part of the value of a 2-year break between iterations is the ability to reflect on that learning, implement ideas or change and then report back on the following course. On JOD 2 new models are introduced, currently 'Kotter's 8-steps' and the 'Kubler-Ross Grief Cycle', before performing a Cambridge Union-style debate on a nominated leader against their peers.

Kotter's 8-steps are particularly suited to explaining the logical and methodical process of leading change and addressing common failures of change programmes. The Kubler-Ross model deals with emotional intelligence thereby helping new Flt Cdrs understand the emotional processes personnel transit when the organisation they care deeply about is being changed. By the time students reach JOD 3, their pre-work is to develop and come prepared to present a model of leadership of their own design, which encompasses all their experience and study of leadership since joining the RAF some 7+ years before. Again, the value of the 4 weeks of junior officer development has enhanced the quality of each attendee and been magnified by the design that deliberately enforces 2 years of reflection between each intervention.

ICSC(A)

The original 2006 IOT cohort are now approaching ICSC(A), hence the current re-working of the ICSC(A) course content to allow the excellent progress to date to be continued beyond the JODP and into the senior ranks. The ICSC(A) is for newly promoted Squadron Leaders and is aimed at preparing them for their new rank. At the end of the Course the students should have a greater understanding of Air Power's contribution to Defence as a whole. This is to increase their credibility, particularly as Air Power advocates within the joint environment. The Course is residential within the JSCSC. In an ideal world, all students would complete the course on promotion and prior to taking up their new appointments, although manning constraints make this unachievable for many officers. However most students do complete the course within, or at the end of, their first tour as Squadron Leaders. In its original guise, the course was 4 weeks long; however, in 2007 a decision was taken by the RAF Senior Leadership Team to increase this to 8 weeks. It was believed that this would give the RAF's newly promoted senior officers the maximum benefit and opportunities offered by the JSCSC, whilst working within manning constraints.

In the current form, ICSC(A) is 'blocked' into 6 modules: Introduction; Air and Space Power; Strategic Context; Warfighting and Planning; Command Leadership and Management; Air Power Presentations and Future. When at the Staff College the students' time is split between lectures, primarily given by university lecturers or visiting senior officers, Syndicate Room lessons and discussion periods. In addition, there are external visits to Air Command, MOD, HQ Land, HQ Fleet, DE&S and PJHQ. One of the main benefits of the extending the course from 4 to 8 weeks was that it enabled greater support from the highest levels of Defence. Over the past year the ICSC(A) has been privileged to hear from the Chief of the Air Staff, the Second Sea Lord, Director General Finance, as well as various other senior officers from all services and the Civil Service. Another advantage of extending the course was that it gave the opportunity for a 3-day Staff Ride to be included. This takes place in the Pas-de-Calais region of Northern France where, accompanied by Academics, various First and Second World War stands are visited. For many students this proves to be the highlight of ICSC(A), despite the fact that they are required to give a formally-assessed group presentation on an aspect of warfare relevant to a particular stand.

Throughout the Course the students' analysis is assessed at the post-graduate level. The main academic assessment is a 4000-word essay which is marked by the retained university staff. The final assessment comes in the form of a formal group Air Power Presentation in the last week of the course.

The future ICSC(A) is currently under development. A new academic module has been developed, and although similar in outlook and construct to the current module it has been further refined and brought up to date. The other aspects of the course are being developed by the RAF Division's in-house Course Design Team. Although the work is currently on-going, ICSC(A) will be restructured to bring it in line with the output from the JOD Programme; in particular, marrying it with the output from JOD 3. Some elements of the Course will remain, such as the Staff Ride and the modularized structure, however, others will be amended. For instance, it is currently planned to replace the group Air Power Presentations with an individual 'carousel' assessment that will run throughout the 8 weeks.

Summary

So, the RAF has truly built its windmills when the winds of change have blown to enhance its generic officer education. Is this iteration of professional development the optimum and final chapter? Certainly not. The current ICSC(A) redesign is looking to develop the perceptual and conceptual edge of JODP graduates and new senior officers. This is necessary as it is our people's ability to think through a problem with minimal resources that will give us the edge in the campaigns of tomorrow. Since 2003 and the invasion of Iraq, junior officers have worked alongside their peers in the other services at a very early stage of the careers than hitherto. With less personnel in Defence, the ability to operate jointly is an imperative. Therefore, it is the opinion of this author that integration of the services at an earlier stage in generic education than the Advanced Course is essential to improve cross-service understanding and operational output. However, engagement at a higher level than CAS is likely to be necessary to make that change a reality. Now that truly would be a transformational change.

In the meantime, is there anything that could be done to improve the RAF's system? This author opines that the current ICSC(A) should be split into 2 distinct courses and for these to join the continuum beyond JOD 3. Squadron Leaders are required to complete a staff and command tour to be considered for promotion, so the first 2 tours as a Sqn Ldr would be one of each type in an ideal world. Therefore, the continuing of small bite-size interventions should go beyond JOD 3 to similarly magnify the efficacy of the ICSC(A) and improve the preparedness of a cohort to compete with their land counterparts, who will have completed a much longer 32-week ICSC (Land) course in preparation for the Advanced Course.It can be difficult to recognise the transformational nature of change programmes in the moment. However, with hindsight, the change process that was instituted by Sir Peter Squires has left a true legacy of an early-career development programme that is the envy of the other 2 Services. The challenge will be to keep that momentum to inject jointery at an earlier stage and to target those interventions at the appropriate point for individuals to better prepare them for the roles they are required to fill in the Service need.

In the meantime, RAF culture is changing. The new cohort of junior officers have the Moral Courage to challenge with reason beyond their Area Of Responsibility. This ability is necessarily and deliberately being trained-in following the Haddon-Cave report. Consequently, all must accept the need to allow the constructive questioning of decisions/action, considering challenges as cooperative and collegiate, to be encouraged and supported, perhaps in the transformational sense. This is cultural and behavioural change in action, initiated by a leader's vision. It has reached the self-sustaining point and will continue to filter through the organisation. Sometimes it takes time to see the transformational nature of a change programme, but this one is a fitting example in action.

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May 2012 - International Training

Are You Hungry? Are You Sure?

Wing Commander M Allport RAFR, International Training Officer

These were the first two sentences that were addressed to Saman Ali Mohammed Al-Muktar on his arrival with his homestay family for his English language training in York in preparation for Initial Officer Training (IOT). Unfortunately his vocabulary did not stretch to hungry or sure so he politely responded no to the first question and an equally polite yes to the second question. He went to bed hungry that night!

That was over 4 years ago. Saman stayed in English language training at York St John University for two years before joining IOT as an Iraqi Air Force cadet in October 2008. He graduated in August 2009, having lost some 3 stones during the course! After completing his Elementary Flying Training (EFT) at RAF Church Fenton, he undertook the Multi-Engine Advanced Flying Training (MEAFT) course on 45(R) Sqn at RAF Cranwell. Lt Saman Al-Muktar was awarded his wings by the Commandant RAF College on 11 November 2011.

Lt Saman Al Muktar receiving his wings from Air Cdre Paul Oborn, Commandant RAF College Cranwell.

Fifteen Iraqis have followed this programme so far including Lt Arzang Zebari who passed MEAFT to a High Average with a Final Handling Test which was Above Average. Lt Zebari's father is the Iraqi Chief of Staff (equivalent to our Chief of Defence Staff). Lt Mustafa Saad Shukur Al-Henkawe was awarded the Overseas Students' Prize on IOT Course 10. He was ranked 32nd out of 124 on his course; a remarkable achievement by an international cadet, especially given that English is his third language, after Kurdish and Arabic. He was presented with the annual International Sword of Honour by Her Majesty The Queen in 2009.

Lt Aari Omar Othman Nanakali was awarded the Overseas Students' Prize at the same Queen's Review. His father, General Omer Osman Ibrahim Nanakali, Deputy Chief of Staff and Minister for Peshmerga attended his son's parade. I took this opportunity to advise him that the Iraqi students had not been paid for 8 months. He immediately turned to the Iraqi Defence Attaché and berated him. His interpreter then translated for me as follows – the General has just said to him "I am going to kick your 'gluteus maximus (or similar!)'" I am pleased to report that shortly after this intervention, the Iraqi students were paid in full.

Her Majesty the Queen presents Lt Mustafa Saad Shukur Al-Henkawe with the International Sword of Honour in May 2009.

Lt Al-Hazza (KAF) is pictured in a 16(R) Sqn Tutor.

International students have become increasingly important within IOT as the numbers of RAF candidates has reduced. During 2011 up to a third of places on each course were taken up by International Cadets.

The number of countries sending cadets to undertake courses at RAF Cranwell continues to increase, with China and Afghanistan the most recent additions to the list. Trinidad and Tobago continue to train up their emergent Air Guard with 17 candidates training over the last two years. The Royal Air Force of Oman also continues to send some of their best students to the College with Lt Salim Al-Adi being the most successful graduate of recent years. Graded as 10th out of 108 cadets on his IOT course he won the International Sword of Honour in 2011, presented by the Prime Minister, David Cameron.

It is anticipated that cadets from Algeria, Bangladesh, Japan, Indonesia, Malaysia, Sudan, Kenya, South Africa and Yemen will attend IOT at RAF College Cranwell during 2012.

International officers have also taken full advantage of the spare capacity in flying training at RAF Cranwell with all Kuwait Air Force (KAF) pilots having undertaken Elementary Flying Training (EFT) at RAF Cranwell over the last 12 years.

Three Kenyan officers have now completed their Central Flying School (CFS) course on 115 Sqn, whilst 10 Algerian officers have completed both CFS courses at RAF Cranwell and RAF Valley. After a one year break, 10 new international candidates will start Military English Language Training in York in January 2012, before being offered EFT places in the following year. English Language Training is also undertaken at De Montfort University, Leicester for Algerian Navy students prior to their rotary wing training at RAF Shawbury and for Omani students who continue onto Air Traffic Control training, also at RAF Shawbury.

Finally, cadets from Oman, Saudi Arabia and Qatar have completed engineer and logistics training within the Defence College of Aeronautical Engineering, the Defence College of Communication and Information Systems and the Defence College of Logistics and Personnel Administration.

The first Chinese graduate takes a picture of his fellow Internationals from Jamaican and Belize.

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