Indexing the intelligence
Some inferences, some speculations

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A description of the machinery and processes that facilitated the extraction of useful information from the vast amounts of security and military intelligence accumulated by the British security agencies during the period from 1909 to 1945.

Introduction
In 1909, the Secret Service Bureau was established with two distinct sections; one to be responsible for foreign activities and the other for those at home. The foreign section was to become the Secret Intelligence Service, or MI6; the home section was to become the Security Service, or MI5. In keeping with their functions, these organizations accumulated prodigious quantities of intelligence from a wide range of sources, information that could only be controlled and made useful by the appropriate use of indexing. This paper briefly describes the indexes themselves, the personnel involved in their making and maintenance, and their uses and users.

First, however, a slight digression is called for, concerning the terminology used in the sources, both official and personal. There is much imprecision. An ‘index’ is not necessarily what professional indexers might call an index (an inversion of data – of a file of records, or in a book, for instance); it might turn out to be all the data plus a card file and include even the staff itself. (According to Calvocoressi (1981: 73), for example, the Air Index ‘consisted of about two dozen girls and hundreds of thousands of cards’.) The word ‘indexing’ is often replaced by ‘carding’; ‘cross-referencing’ is used to mean multiple entries. Hence the inferences and speculations of the subtitle.

With those caveats entered, let us look at the indexing in three establishments: the Central Registry of MI5, the Information Section of the London Reception Centre (LRC) and the Government Code and Cypher School (GC&CS).2

Central Registry of MI5
The Central Registry of MI5 was set up soon after the bureau was first established. Part of its brief was to ensure ‘that all Names, Places, and Subjects mentioned in the documents should be minutely indexed’ to allow action to be ‘based on a knowledge of all the available facts, a knowledge which is to be obtained by consulting all relevant documents’.

The Personal File and Subject File sections of the Registry staff were responsible for the indexing of every paper coming into the Bureau from whatever source. Indexing machinery to facilitate look-up ‘had been evolved as the occasion arose’ and ‘when MI5 first started there were comparatively so few files that they were known individually to the staff, who found no inconvenience in the fact that there were two files under the name ‘Smith’ (no Christian name) one being described as Smith of Norwich and the other Smith of Amsterdam.’ As the accession rates grew to 2000 new files per month, this was tightened up and by 1914 some codification of practice was established. Published internally as Office instructions, it was ‘intended to give such information regarding the registration, filing and indexing as will enable new members of the staff . . . to obtain a general idea of the mechanism at their disposal.’

Methods of indexing
Three general card indexes – for names, places and subjects – were established and every paper was indexed in one or all of them. There were additional indexes such as the Subject Index (a printed distillation of the contents of the subject files) and the Special Intelligence Index to the Black List. Personal names, geographic names and subjects all presented problems for the staff involved in creating the indexes.

Personal names. Here difficulties were ascribed principally to the sometimes fragile methods of acquisition (over the telephone; from illiterate informants; from partially overheard conversations; etc.). Two great problems were identified: first, determining the correct forms of the names in the information, so that they might be properly indexed; second, recognizing the same names should they again be brought to the notice of the Bureau, so that they might be correctly ‘looked up’. These were exacerbated by the need to handle names in a number of languages. Many examples are given, including, for example, 73 variations of Smith or Schmidt; 48 possible spellings for Eriksen, 14 of them having occurred. These of course are the classic problems addressed by cataloguing codes – but the indexers were not dealing with names conveniently presented on title pages but supplied by many different sources of variable quality.

In 1918 the practice of indexing the various spellings of a name under its most common form was established. Thus the entry index card for ‘SCHMIDT. Johann’ would be a see cross-reference to ‘SMITH’ and ‘Johann Schmidt’ would be found in the ‘SMITH’ sequence. While effective and effi-
cient in closed systems such as union catalogues and the Registry, it is not so convenient for the non-experienced and this perhaps explains why intelligence officers generally left consultation to the Registry staff rather than doing it themselves.  

Geographic names. The ‘place card index’ covered all manner of locations, from towns and seaports through streets and buildings to ships and hotels. It was divided into three groups: London, provincial and foreign, and ships. Arrangements were established to control for variants in the names of towns (e.g. The Hague and S’gravenhagen; Valkenburg and Franquemont). The same was done for similar street names in the same city (e.g. 13 Charles Streets in London); and for variations in street names, hotel names and the like.

Subjects. The approach to subject indexing might, nowadays, be regarded as quaint. Documents belonging to ‘stock subjects for which files [were] kept’ were indexed by means of the contents sheets kept in those files. These subjects were broad in scope, such as ‘Belgians’, ‘Censorship’, ‘Espionage’, ‘Prisoners of war’ and ‘Smuggling and trading with the enemy’. Where subjects did not have such files, access was via the subject card index, which, being simply an auxiliary to the subject files, contained only such references as could not be entered on their index sheets.

These cards . . . [were] arranged in alphabetical order on the same lines as the index of a book. Each . . . [contained] the . . . subject [and] a reference to the place in which every document in the office referring to that subject . . . [was to be] found.  

They were not topic headings in the conventional sense but memorable details associated with suspects, ranging from ‘Donkey’ and ‘False nose’ to ‘Hymn of hate’, ‘Mole on the brow’ and ‘Wooden leg’.

It was acknowledged that subject indexing was complicated and this reflected the doubts of many librarians in the mid-19th century that seekers would be able to select the terms used by indexers for any particular topic.

The demise of the Registry

Despite the well-established and documented success of the Central Registry indexes, a memorandum of 1919 refers to the problems of coping with vast amounts of information from which it was difficult to extract the useful elements. It contains suggestions for improving the indexing and states that a more systematic approach was required if the information system were to function efficiently in the future.

However, improvements were not introduced; rather, the War Office allowed the Registry to become moribund, starved of status and resources. It is hardly surprising that under the pressure of renewed hostilities in 1939 the system crashed. According to the official history of the Security Service, the Central index ‘had been allowed to lapse into a lamentable state’, a degeneration that included misplaced cards, a great lack of guide cards and overfull cabinets.

The necessary reorganization of MI5’s information commenced in July 1940 when Horrocks, a specialist in business methods, was recruited from Roneo (but, it appears, no indexers, librarians or documentalists joined the staff). The opportunity was taken to work on the document files and the index, weeding, consolidating and improving consistency. By the end of the war the very much more efficient Registry incorporated an index of over one and a quarter million entries.

London Reception Centre

The London Reception Centre had been opened to handle large numbers of alien refugees flooding into Britain from occupied Europe. To facilitate confirmation of their _bona fides_, the Information Section established its Information Index, which came to contain a great variety of relevant material about the countries from which they had arrived, along with details of methods and routes used by enemy agents or members of allied resistance movements. The index was in two separate parts – the Name Index and the Geographical Index – and eventually contained some 100,000 cards.

The Name Index was a single sequence of cards, each containing the full name, aliases, age, occupations, addresses, physical description, and all relevant details regarding history and circumstances. The more complex Geographical Index was arranged first by country, with each country then subdivided by addresses, towns and subjects.

The Address Index was first sorted by towns in alphabetical order, then by further location devices such as telephone numbers, PO Box numbers, streets in alphabetical order, hotels, restaurants, and so on. Address cards contained information regarding the address itself or its telephone number (e.g. ‘flat used for housing German agents’). Each of the ‘town cards’ would contain the names of all persons associated with the town, indicating their suspect status. It was used principally in conjunction with the Name Index so that all data on persons related to a specific town could be retrieved.

Subject Index material was assigned to the following broad areas: ‘Organizations’, ‘Intelligence services’, ‘Authorities’, ‘Welfare organizations’, ‘Regulations and controls’, ‘Prisons’ and ‘Miscellaneous’. Each of these categories included several sub-categories; ‘Organizations’, for example, included ‘Pro-allied organizations’, ‘Resistance movements’, ‘Escape routes’, ‘Communist Party’ and ‘Passwords’. They seemed not to be subject headings but guidance on what should be indexed. Thus while ‘Resistance movements’ appears as a category, the heading on the card itself was ‘Resistance organizations’.

Indexing process

Officers in charge of investigations were responsible for marking their reports for ‘carding’. However, considerable discretion was left to the ‘carders’ themselves. Indexing policy was plainly driven by the use made of the Information Index, which was principally by staff checking names on arrival lists. It was also used as a reference source for report writing, officers visiting the index with their notes to check details before writing up. This compares with reported
non-use of MI5 Registry indexes by officers, testimony perhaps to the relative ease of use of the LRC indexes for non-indexers.

Indexes at the Government Code and Cypher School (GC&CS)

Vast quantities of information were obtained as a result of decoding Enigma and other enciphered signals; and the intelligence was made useful by a wide range of different types of indexes.

The indexes

Examples of indexes in the archives in Bletchley Park and documents in the Public Record Office (PRO) cast light on practices and procedures. Some details are also to be found in the published reminiscences of those who used them. There seem to have been three basic types of indexes: those controlling the contents of the decoded messages; those facilitating the translation and context-setting of terms found in the messages; and those exploiting the technical detail of the messages, such as transmission stations, keys used, time sent, and so on.

The indexes controlling the contents of the decoded messages included the Air Index (Hut 3), the Military (Army) Index (Hut 3) and the Naval Index (Hut 4). There was also a separate naval index in Hut 3. However, these terms disguise a multiplicity of sequences and might be better taken as indicating the different services to which each had specific responsibility. Additionally, there were special indexes such as the ‘Locations index’ to German Air Force operational commands and units, and the ‘Strengths index’ to aircraft and crews of German Air Force units.

As each message was translated it was passed to the indexing watch (or team), which identified the words and phrases to be indexed. All the details to be indexed were underlined in red and before the cards were written the work was checked by the head of the index, who would supplement or draw attention to unnecessary or inaccurate work.

Thus a message along these lines

Request allocation of 10 high pressure pumps to Lensburg. Entire stocks destroyed by air attack. Signed JG5, Major Schmidt

would generate the following indexing:

- Location of JG5 at Lensburg (JG5 card)
- Location at Lensburg of JG5 (Lensburg card)
- Fact that Major Schmidt belongs to JG5 (Major Schmidt card)
- Fact that JG5 possesses a Major Schmidt (JG5 card)
- etc. 17

The Air Index had five main sections: ‘Units’, ‘Locations’, ‘Personalities’, ‘Equipment’ and ‘General subjects’. ‘Units’ included, for example: ‘Authorities’, ‘ARP’, ‘Flying’, ‘Medical’, ‘Servicing’, etc.; while ‘Locations’ contained ‘Airfields’ and ‘Ground units’. In addition, the following were indexed: cover names, abbreviations, proformas, works numbers for aircraft and aircraft engines and so on. 18 According to Calvocoresi (1981: 73), the list of interesting details was endless, as might have been expected in a process that was indexing, in effect, the entire universe of military knowledge and much else.

Relationships between terms was established by means of ‘signpost cards’, which indicated unused headings. The problem of the occurrence of the same character string in different contexts was also recognized and addressed. For example, ‘TAURUS’ might be a covername, a type of aircraft or a detachment, and the term would appear in all the appropriate sequences.

The nearest we get to codification is in the description of the cards for the Air Index, showing what went onto them and an indication of the form the details took. A former employee of Kelly’s Directories, Cullingham, was responsible for the design and establishment of the Air Index; so some inferences may be drawn from indexing practice in those publications in the 1930s. As Lewin (1978: 121) indicates, ‘by the peak of war the index of Hut 3 ... filled a large room’. This is corroborated by a floor plan among PRO documents. 19

The second category of indexes might be described as technical dictionaries. There were three different types: abbreviations and acronyms; technical terms and industrial organizations; and indexes to printed sources. They were used to convert ‘Servicese’ (contractions, abbreviations, service slang) and terms covering new developments in technology, tactics, and so on, into what were called ‘equivalents’. Examples of such indexes were kept in Hut 3; one to interpret abbreviations, and another to clarify references to industrial organizations (such as manufacturing firms). Naval Section VI in Hut 4 created a Japanese/English dictionary of naval terms, an index to the contents of a collection of captured reference manuals and periodicals.

The third category of indexes was concerned with the ‘preambles’ of the messages, which could be used effectively in different ways by decoders, translators and analysts of the decoded intelligence. These details could give large amounts of valuable intelligence (e.g. disposition and movements of units, orders of battle, etc.) quite independently of the contents of the messages themselves.

The Hut 7 Hollerith punched card index was, in fact, part of the decoding effort making use of these preambles and not an information retrieval machine in the way the other indexes were. 20

Users and use

The indexes were constantly being consulted by members of the watches (translators, analysts); by the advisers (air, military and naval) who were responsible for the final signals transmitted to the commands; and by various ‘back-room’ sections such as those engaged in longer-term research. It was at the index that the individual insignificant term or phrase would connect with one already present to ‘throw a sudden light on some secret’, make meaningful some obscure signal and enable the advisers to produce the intelligence useful to operational commands.
Indexing work was regarded as essentially clerical and rather lowly; and described (principally by non-indexers) as boring, dull and monotonous. What is not clear is the degree of expertise that was available. Cullingham obviously brought some from Kelly’s Directories. But while a few librarians featured among the staff, it seems that they had not been recruited specifically for their indexing skills. The official history speaks of indexing as ‘exacting, requiring concentration in the midst of bustle’, indicating that the chief qualifications needed were speed, accuracy, intelligence, patience, and neat and legible handwriting. Knowledge of German was an asset and most of the air indexers and military indexers were graduates with a fair knowledge of the language. The first part of the training was familiarization with the German Air Force, after which the new recruits were put to work with the most experienced indexers.

As Wallis and Lavell (2000) have shown, the indexers made an invaluable contribution to the war effort and Calvocoressi (1981) reported that the importance of the Air Index could not be exaggerated. In Lewin’s opinion, ‘the index was unique and effective . . . processing of intercepts would have been impossible without it’ (Lewin, 1978: 121).

General conclusions

The indexing activity in these three establishments displayed considerable ingenuity in the design and operation of indexing mechanisms. Procedures mostly seem to have been home grown, with little recourse to the wealth of contemporaneous professional knowledge that might have made the information retrieval systems even more effective than they undoubtedly were. Nonetheless, the activities in all three establishments represent an interesting and important aspect of indexing history.

Notes

1. For the use of these terms see PRO documents KV1/49 H Branch report. The organisation and administration of MI5; KV4/7 Report on the operations of BID and BID-UK (London Reception Centre); HW3/119-120 History of Hut 3 at BP, 1940–1945, passim.
2. For consideration of the first two of these in a wider context see Black and Brunt (2000).

3. KV1/53 annexure 1. Notes on the general organisation of a counter espionage bureau.
6. KV1/50 H Branch report, §55.
7. KV1/56 Office instructions, 1916.
9. This resembles Berghöffer filing, devised for the Frankfurter Sammelkatalog, 1891, as modified for the Swiss Union Catalogue.
10. KV1/50 H Branch report, §96
11. KV1/55 Work of the Registry issued by the Central Special Intelligence Bureau, pp. 46–7.
12. KV1/56 Office instructions, §45, p.9
15. KV4/7 London Reception Centre, Ch. 1, pp. 22–3.
16. KV4/7 London Reception Centre, Ch. 2, p. 10.

References


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