following Cartan. This comparison is somewhat tricky, though elementary, and would be easier to follow if illustrated by examples (but none are given).

Finally, Chapter 8 carries out the classification (due to Cartan, with improvements by F. Gantmacher and others) of real forms of a complex semisimple Lie algebra. The chapter begins with the determination of maximal subalgebras of maximal rank in a compact Lie algebra, following A. Borel, J. de Siebenthal. Here, as elsewhere in the book, there is some lack of connecting narrative; in particular, the reader is not told right away why these subalgebras are being investigated. Again some crucial use is made of results from (6.9), but otherwise the exposition is self-contained.

This outline indicates both some strengths and some weaknesses in the authors' approach. Some of the topics they cover (affine Weyl groups, real representations, classification of real forms) are not so often treated in other standard books, so the researcher in Lie theory may find this book quite helpful as a reference. But for Lie algebras, Samelson [5] probably provides a better first course, and for Lie groups, Varadarajan [6] tells the story in a more organized, self-contained way. (For an approach emphasizing linear Lie groups, [2] would also be well worth considering if it were written in something closer to English.) The ultimate book has not been–and doubtless will not be–written. Goto and Grosshans have given a generally clear account of semisimple Lie algebras in the spirit of Cartan and Weyl, but they have not reached a fully satisfactory compromise in their parallel treatment of Lie groups.

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Closed graph theorems and webbed spaces, by M. De Wilde, Research Notes in Mathematics, no. 19, Pitman, London, 1978, xii + 158 pp.

It was in the early thirties, during the depression, that the twins (if I may call them so) of Functional Analysis were born, thanks to Banach [1]. I mean, of course, the open mapping (o.m.) and closed graph (c.g.) theorems: Let E, F be two complete metrizable topological vector spaces (called F-spaces for short). Then (o.m.): each linear continuous map of E onto F is open; (c.g.): each linear map of F into E with closed graph is continuous. (These are two