AN EVALUATION OF MEDICAL PERIODICALS

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PART I

THE evaluation of any literature, scientific or artistic, is a difficult matter. Whether a book or an article is pronounced good or bad depends much on the personal bias of the reviewer. In the main, the soundest test for all literature—be it the work of Shakespeare or of Harvey—is the test of time and use.

The evaluation of journals as organs of medical research is a somewhat different matter,—and yet, not so different, either. The test of time can be and indeed has been applied to them, for the shelves of medical libraries are burdened with many an age-yellowed sporadic journal and pamphlet—once the mouth-piece of some learned society. But nowadays new journals appear almost monthly, until even the richest libraries cannot afford them all; nor can the most indefatigable reader hope to do more than scan the contents of the more important journals. Today there are approximately 2,220 medical and biological periodicals, 511 of which are published in this country alone. It is this almost staggering amount of material that demands some evaluation, some sorting-out of the most useful publications.

Whoever makes such an attempt (and obviously the research man himself cannot wait for time to do this) must choose some criterion for estimating the usefulness of journals. terion would necessarily be more or less arbitrary and open to The one chosen, in this survey, for evaluating the usefulness of the periodicals in a given field, was simply the frequency with which they were cited in bibliographies encompassing that field. There may be some objection to the evaluating of a journal's usefulness merely by counting the number of times it is cited by authorities in a given field. This method would seem to penalize the journal that offers many minor contribu-But such did not seem to be the case in endocrinology. the field that was used for a trial of the method (3). evaluation of the journals in this field was obtained, and therefore the method was extended into the present survey. ilar determination of the value of periodicals in fields other than medicine has been carried out—in chemistry (5), mathematics (1), and geology (2). In medicine it has been done for

general medicine (4, 7), endocrinology (3), and endocrinology of sex (6).*

To be more specific as to method: bibliographies on the various subjects were obtained from suitable sources (usually from a single source to each field, but in some cases from a combination of sources), and the references to each journal were tabulated individually. The sources of the bibliographies vary somewhat from field to field but on the whole they are comparable. At first it was planned to use three sources of material: (1) Long bibliographies from recent books on the subject, such as Cameron's "Recent advances in endocrinology"; (2) Bibliographies from journals confined to a single field, such as the American Journal of Roentgenology and Radium Therapy; (3) Abstract journals. As the study developed it became apparent that the second of these sources was the best, for the bibliographies in journals were of later date than those in books of a survey nature, they contained more references, and were much more generally accessible. The third group was discarded altogether because of the tendency of abstract journals to give abstracts from journals that are to be obtained only with difficulty, to the exclusion of those of wide circulation. It was suggested that the Quarterly Cumulative Index Medicus would be a uniform source, but use of it would have defeated the purpose of the analysis,—namely, an evaluation based on use; for the Quarterly Cumulative lists all articles, while bibliographies presumably list only the articles actually used. The Quarterly Cumulative also lists articles only once, while an article, if it is really of value, may be referred to several times in the bibliographies.

In most cases, the references in one volume of a periodical were used, although in some cases two volumes were required to give a sufficient number. Each of the tabulations was based on more than 500 references. The minimum is actually higher than 500, since no references to a journal were counted unless that journal was referred to more than once. The average number of references (to all sources) is 990.

There was some question as to what should constitute an adequate number of references. The minimum of 500 was finally decided upon. That it was a good choice is borne out by the following results. After the tabulations were made, the number of references was correlated with the number of journals

^{*}For a similar appraisal of dental periodicals, see Dr. Ingo Hackh's article in the preceding number of this BULLETIN, 25: 109. (Editor's note.)

referred to. The correlation coefficient was $.738 \pm .064$. There is a relatively slow increase of the number of journals cited, in comparison with the increase of the number of references.¹ The largest tabulation for any one field was 2,500 references to 129 journals; and the smallest, 503 references to 73 journals. Clearly, the number of references and the number of journals referred to do not increase at the same rate.

The next question was: would the references yield a list of journals that would contain three-fourths of the important ma-Jenkins (4) showed that the law of diminishing returns holds true for one who peruses all the literature in general medicine. Mengert (6) showed the operation of this law in the literature on the endocrinology of sex. This fact has been brought out again in a graph * which represented the average per cent. of articles in the number of journals. This graph showed that for the first two journals in the lists the average per cent. of articles to the average field is twenty-five per cent.; for the first eight, fifty per cent.; and for the first twenty-five, seventyfive per cent. Therefore compilation was made of comparatively short lists of journals that contain practically all of the literature relating to each field; consequently, the interesting conclusion is reached that one does not need to examine all the periodicals in a given field and allied fields to cover the subject adequately.

From the frequency tabulations mentioned above, the journals were arranged in the order of their importance for each field. For this publication, the lists have been shortened to twenty-five journals or less, but in every case they cover from two-thirds to three-fourths of the material.

This method of tabulation has the disadvantage of not giving any indication of the usefulness of abstract journals and journals with abstract sections. An attempt has been made to overcome

¹ The findings were as follows, listed in the ascending order of the number of references, and given in "round" numbers except in the cases of the largest and the smallest tabulations:

No. of fields	No. of references	Journals referred to
I	503	. 73
11	500 to 700	50 to 100
9	760 to 1000	50 to 100
3	1500 to 1600	120 to 150
I	1850	130
I	£2475	335
I	/ 2500	129

^{*} Not reproduced, since the author's excellent summary gives us everything but the actual "curve" itself. (Editor's note.)

this lack by appending a list of such journals useful in each field. (See the comment following each table.)

In nearly every case the journal which was used in tabulating appears first in the list of journals for its field. This, at first glance, seems to indicate that writers publishing in a given journal are unduly partial in citing references to it and that the result is unfair to other journals. This conclusion has been demonstrated to be untrue in the case of other sciences, and there is no reason why medicine should be an exception.

The choice of fields to tabulate was a difficult problem, and the place of some in the list may be questioned. The criterion was again one of use. An attempt was made to include any field that might be useful by itself. For example, the study of diabetes is not a field in the sense that otolaryngology and surgery are; but there are clinics and research groups devoted exclusively to diabetes, and thus a section on journals of interest to these groups seems advisable. It is possible that other groups of equal importance have been omitted, but it is hoped that the omissions have been few. These lists, together with the abstract sources appended, should solve the problem of what to read to "keep up with the literature."

(Text continued on p. 185)

3. BACTERIOLOGY	cum. cum.	7.9 I. J. Exper. Med. 12.7 15.7 2. J. A. M. A. 21.2 22.6 2. I. Infert. Dis. 28.6	4. Zentralbl. f. Bakt.	6. J. Bact			55.4 11. Pub. Health Rep 61.5 57.4 12. I. Med. Research 64.1	13. J. Path. and Bact.	14. Lancet	16. Bull. Johns Hopkins Hosp	65.1 16. Klin. Wchnschr	Am. J. Pub. Health	19.	70.3 20. J. rlyg	21. Wien, klin. Wchnschr.	22. Am. J. Hyg 85.1		75.4 Data from the "Textbook of bacteriology,"	20.0 by Zinsser and Bayne-Jones, 7th ed. (Ap-	935. pleton-Century, 1934). I abulation of these fer- data vielded 2507 references to 129 journals.		Biol. Abstr.	Zentralbl. t. Bakt.		_
2. SURGERY	Rank Journal	1. Arch. Surg	3. J. A. M. A	5. Brit. M. J. S. Zentralbl. f. Chir.	6. Am. J. Surg	7. Lancet 8. Beitr. z. klin. Chir.	9. Deutsche Ztschr. f. Chir.	II. Virchows Arch. f. path. Anat	12. München. med. Wchnschr	14. Am. J. Physiol.	14. Arch. Neurol. u. Psychiat.	14. J. Urol.	15. Brit. J. Surg.	16. Froc. Soc. Exper. Biol. & Med 16. Surg. Clin. N. A	17. Am. J. Roentgenol.	17. Bull. et Mem. Soc. d. Chirurgiens de Paris	17. M. Rec.	17. Ztschr. f. orthop, Chir	81 others (34.6%)	Tabulation of these data vielded 1000 refer-	ences to 109 journals.	Abstract sources for this field:	Internat. Abstr. Surg.	J. Bone & Joint Surg. Zentralbl. f. Chir.	.:. 7
1. ANESTHESIA AND ANALGESIA	Rank Journal % ref.	1. Curr. Res. Anesth. & Analg. 10.0 2. J. A. M. A. 18.5 3. Am. I. Physiol	4. Zentralli, f. Gynäk, 23.7.2 5. Am. J. Surg. 31.2.2	J. Pharmacol, & Exper. Therap		9. J. Am, Chem. Soc					14. Arch. Int. Med 61.7	14. Zentralbl. f. Chir. 64.9		15. J. Blol. Chem 67.9	anesth.) 69.4	16. Klin. Wchnschr. 70.8	98.9	Data from Curr. Res. in Anesth. & Analg.,	vols. 10-12, 1931-1933. Tabulation of these	data yielded 799 references to 74 journals. Abstract sources for this field:	Internat. Abstr. Surg.	Curr. Res. in Anesth. & Analg.	Chem. Abstr.		

6. CANCER.	cum. Sournal cum.	16.7 r. Am. J. Cancer	39.1	46.0 5. J. A. M. A.	48.2 6. Arch. Surg	52.4 8. Ann. Surg	54.4 56.4	58.3 9. Lancet	60.2	63.8 II. Beitr. z. path. Anat. u. z. allg.		68.7 Canger	70.0 13. Am. J. M. Sc.	71.2 13. Biochem. J	72.4 14. Beitr. z. klin. Chir.	73.4 15. Froc. Soc. Exper. Biol. and Med.	75.5	76.4 17. Biochem. Ztschr.	18. Arch. I. exper. Zelliorsch.	61 10	19. J. Path. and Bact.	19. Klin. Wchnschr.		Data from the Am. J. Cancer, vols. 23-24. 1935. Tabulation of these data vielded	loid references to 81 journals.	Abstract Sources 10f this held. Am I Cancer	Ztschr. f. Krebsforsch.	Internat. Abstr. Surg.
5. PARASITOLOGY	Rank Journal	1. J. Parasitology 2. Am. J. Hyg.	3. Parasitology	5. Science	6. J. Am. Vet. M. A	7. Arch. f. Schiffs- u. Tropen-Hyg	7. J. Helminthol	8. Ann. de Parasitol.	8. I. A. M. A.	9. Ill. Biol. Monogr.	9. Zool. Anz.	ro. Zool. I. Abt. Syst.	Ξ	12. Biol. Bull.	12. Proc. U. S. Nat. Mus.	13. J. Exper. Missensch. Zool				14. O. S. D. M. Bull 78.2 54 others (22.2%) 100.4	Data from the J. Parasitology, vols. 21-	18, 1935-1932. Tabulation of these data	yielded 695 references to 80 journals.	Abstract source for this field: Zentralbl. f. Bakt,				
4. INFECTIOUS DISEASES	Rank Journal % ref.	1. J. Infect. Dis	3. J. Bact. 32.1 4. Zentralbl. f. Bakt. 37.0	•	o. Froc. Soc. Exper. Biol. & Med 45:3 7. Ztschr. f. Hyg. u. Infektionskr 48.8				12. Ann. Inst. Past 61.5		15. J. Path, and Bact 66.6	15. Mills Wellischit.		J. Lab. and Clin. Med	J. Med. Research	18. J. Frev. Med 75.1		20. Am. J. Trop. Med 78.1		20. Zeschr. 1. Mindulledt 79.9 42 others (19.3%) 99.2	- 4	1934-35. Tabulation of these data yielded		Abstract sources for this field: Biol. Abstr. (since 1926)	Bact. Abstr. (prior to 1926)	Zentratul. 1. Dakt.		

9. CARDIOLOGY	Rank Journal cum. 1. Am. Heart J. 13.9 2. J. A. M. A. 25.9 3. Arch. Int. Med. 25.9 4. Am. J. M. Sc. 25.9 5. J. Clin. Investigation 51.7 6. New England J. Med. 54.0 7. München. Med. Wehnschr. 56.2 8. Ztschr. f. klin. Med. 58.4 9. Froc. Soc. Exper. Biol. and Med. 60.4 62.4 9. Am. Int. Med. 62.4 9. J. Exper. Med. 62.4 9. J. Exper. Med. 62.6 9. Klin. Wehnschr. 62.6 9. Tr. A. Am. Physicians 70.4 10. Med. Klin. 70.4 10. Med. Clin. N. A. 71.9 10. Med. Clin. N. A. 71.9 11. Am. J. Path. 72.5 12. Lancet 71.9 12. Lancet 71.9 12. Lancet 71.9 12. Lancet 71.0 12. Lancet 71.0 12. Lancet 71.0 12. Lancet 71.0 12. Lancet	
8. ROENTGENOLOGY	Rank Journal cum. 1. Am. J. Roentgenol. 13.8 2. J. A. M. A. 25.6 3. Radiology 36.4 4. Ann. Surg. 36.4 5. Surg., Gynec. and Obst. 40.2 6. J. Bone and Joint Surg. 45.6 7. Arch. Surg. 46.6 8. J. Urol. 49.3 9. Am. J. Dis. Child. 51.8 10. Wien. Klin. Wchnschr. 56.2 11. Brit. M. J. 83.3 12. Am. J. Cancer 60.2 13. Arch. Int. Med. 62.1 14. Brit. J. Radiol. 64.0 13. Arch. Int. Med. 65.7 14. Brit. J. Radiol. 65.7 14. Brit. J. Radiol. 67.2 14. Brit. J. Radiol. 67.2 14. Dr. Revent Tuberc. 67.2 14. Brit. J. Radiol. 67.2 14. Am. Rev. Tuberc. 67.2 <t< td=""><td></td></t<>	
7. RADIOLOGY	Name	

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12. ALLERGY	Rank Journal	I. J. Allergy	2. J. M. M. A.	4. J. Immunol.	5. Am. J. M. Sc	6. Arch. Int. Med.	7. Arch. Dermat. and Syph	8. Compt. rend. Soc. de Biol	8. Illinois M. J.	8. Proc. Soc. Exper. Biol. and Med.	o. Ann. Int. Med.	ro. Am. I. Dis. Child.	10. J. Exper. Med	10. Lancet	ro. New England J. Med	11. Am. J. Physiol	11. California and West. Med	11. Presse Méd.			12. J. 510l. Chem	12. Klin. Wennschr.	2. 1 Chas State J. 1975	Data from the J. of Alleray, vol. 6, nos.	2-5, 1935; and "Allergy in general prac-	tice," by Feinberg (Lea & Febiger, 1934).	Tabulation of these data yielded 613 refer-	ences to 56 journals.	Tot Allow: (often 1911)	J. Of Milet By (after 1935)			
	cum. % ref.	23.3			•					53.8		4.65	61.0	62.3	63.5	64.7	65.8	8.99	67.8	8.8	8.69	70.7	72.6		74.3				rnais.				
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ERMATOLOGY SYPHILOLOGY	nal	nd Syph.	. oypu.	and Syp		et. Syph	; de D		nr.	v cnnscnr	7chnschr			t- u. Gesc		ıd Psychi	kins Hos				path. A	Neurol.					Dermato	Tabul	rerences	Svoh.	Rev.	3	aut- u. G
DERMATOLOGY SYPHILOLOGY	Journal	1. Arch. Dermat. and Syph	Arch. Dermat. u. sypn	Brit. I. Dermat. and Syph.	Klin. Wchnschr	Ann. de Dermat. et. Syph	Bull. Soc. franç. de Dermat. et	Syph.	Dermat. Wennschr.	Munchen, med. Wchnschr Arch Int Med	Deutsche med Wchnschr	Lancet	Dermat. Ztschr	Zentralbl. f. Haut- u. Geschlechtskr.	11. Am. J. M. Sc	Veurol. an	Bull. Johns Hopkins Hosp	Brit. M. J.	laematol.	N. Y. State J. M.	vs Arch. 1	Am. J. Syph. and Neurol	Med Klin	Med. Rec.	14. Presse Méd	72 others (25.0%)	Data from Arch. Dermatol. & Syphilol.,	vols. 30-31, 1934-35. Tabulation of these	a 894 re	dract sources for this Arch. Derm. & Svoh.	Urol. & Cutan. Rev.	Am. J. Syph.	Dermat, Zentraibi. Zentralbl. f. Haut- u. Geschlecht.
11.	Rank	. Arch. I	. Arcn. I A N	Brit. 1.	. Klin. V	. Ann. de	. Bull. S	Syph	. Dermat	. Muncne Arch I	Deutsch	. Lancet	. Dermat	. Zentrall	. Am. J.	11. Arch. 1	. Bull. Jo	13. Brit. M	r3. Folia E	S . Y .	· Virchow			. Med. R	. Presse	72 other	Data fro	ls. 30-31	rta yieide	Abstract Arch.	Urol.	Am. J	Zentra
	٠.	10.3	18.9	32.2	36.2	39.9	43.5	46.9	50.0	53.0	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	60.6	61.5			66.3 11	67.8 12.			71.8 13			75.3 14.			ne.			 —				
	cum. % rej	::						:	·:	:	:	: :	:	9	6						٠.			`º : :) "po	Medici	or ref				ankh.		
YĐC					5. Deutsche Arch. f. klin. Med.	ed		ins Hosp.	Med			chnschr.					. path. Anat		17. Compt. rend. Soc. de Biol		17. Med. Klin.	18. Arch. f. exper. Path. u. Pharmakol.		0.001	Data from "Diseases of the blood" (by	in Oxford Medicine.	data yielded 801 refer-	-	eld:		u. Gefass. Krankh.		L
10. HEMATOLOGY	ıal				klin.	fed		cins Ho	Med.	Cob neob	CHIRSCHI	V_{chnsch}	1		:	:	f. path.		de Bio		.,	ath. u. I	: :	: _	ises of	in $0x$	data yi	•	r this held:		. u. Ge	uf.	u Coeur
HEM	Journal	I. J. A. M. A.	Med.	3. J. Experimental A. Am. I. M. Sc.	Arch. f	klin. N	ysiol.	8. Bull. Johns Hopkin	land J.	io. Lancet	ii. Deutsche meu. w	rr. München, med. W	. Med. Research	13. Folia Haemat	14. Brit. M. J	f. Physiol.	Arch. 1	16. Quart. J. Med	nd. Soc.	. Path. and Bact		xper. Pa	18. Janro. I. Ninuern -	58 others (23.6%)	" Disea	iors),	Tabulation of these	ences to 83 journals.	Abstract sources for	r J. matol	f. Herz	Ztschr. f. Kreislauf.	Mal. d
01		A. M.	ch. Int. Fyner	. I.Y.	utsche	chr. f.	ր. J. Pl	II. Johr	w Eng	ncet	utsciic in W.	inchen.	Med. F	lia Hae	it. M. J	Physiol	chows	art. J.	mpt. re	Path.	ğ. Klii	ch. f. e.	oro. 1.	others	from	various authors),	ation of	to 83 jo	ract so	Am. Heart J. Folia Haematol	ıtralbi.	chr. f.	ch. des
	Rank	ı. J.	2: AI	3. J. 4. An	5. De	6. Zts	7. An	8. Bu	9. S	10. La	11: 17:	I W	12. I.	13. Fo	14. Br	15.	15. Vil	16. Qu	17. Co	17. J.	17. Me	18. Ar	18. Ja	. 6.	Dats	varion	Tabul	ences	Abst	Am	Zen	Zts	Ar

l 15. DIABETES	Rank Journal % ref.	1. J. A. M. A. 2. Arch. Int. Med.	⇔ 4	5. Am. J. M. Sc.	7. Am. J. Physiol.	8. J. Clin. Investigation		10. Endocrinol.	11. Proc. Soc. Exper. Biol. and Med.	12. Brit. M. J.	12. J. Metab. Research	13.	14. J. Fnyslol.,	14. Caucet	15. Med. Clin. No. Am.	15. Proc. Staff Meet. Mayo Clin	15. Ztschr. f. klin. Med	16. Am. J. Dis. Child	16. Deutsche med. Wchnschr.			mellitus," by Joslin (Lea & Febiger, 1935).					-
14. ENDOCRINOLOGY	Rank Journal % ref.	1. Am. J. Physiol. 2. Compt. rend. Soc. de Biol.	3. Endocrinol 24.5	5. Klin. Wchnschr 34.2		Endokrinol.			11. Biochem. Ztschr. 57.6				10. Am. J. M. 3c 06.4			19. Arch. f. d. ges. Physiol	19. Zentralbl. f. Gynäk.	20. J. Clin. Investigation		100 others (23.4%)	Data from "Recent advances in endo-	crinology,' by Cameron (Blakiston, 1934);	tion of these data yielded 1619 references	to 125 journals.	Abstract sources for this field:	Endocrinology Endokrinologie	Physiol. Abstr.
13. OTOLARYNGOLOGY	Rank Journal % ref.	ngolhin. and Laryngol	3. Laryngoscope			ng.	ng	M. Sc	10. Lancet 60.5 10. Surg., Gynec, and Obst 62.3		Otol		12. Arch. f. Ohren. Nasen. 11 Kehlle 68 3		. u. theoret. Hals-,	Nasen- u. Ohrenh.	Brit. M. J	14. Virchows Arch. I. path. Ahat 73.8 15. Arch. f. d. ges. Physiol 74.8		ng., Rhin. and Otol.	50C		18-20, 1933-34. Tabulation of these data	yielded 717 references to 88 journals.	Abstract sources for this field:	Ann. Otol., Rhin., & Laryn.	J. Laryngol. & Otol.

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18. OBSTETRICS AND GYNECOLOGY		International Abstr. Surg. Zentralbl. f. Gynäk. J. Obst. & Gynäec. (British)
17. ENDOCRINOLOGY OF SEX (MENGERT'S DATA)	Rank 1. Am. J 2. Compt 3. Proc. 4. Ann. J 6. J. Exp. 7. Arch. 9. Kind. 10. Proc. 11. Zentra 11. J. Ph. 11. J. Ph. 11. Biol. Ph. 11. Biol. Ph. 12. J. A. 13. A. 14. Biol. 17. Arch. 17. Arch. 18. Bull. J 19. Bull. J 11. Arch. 11. Arch. 12. J. A. 11. Arch. 13. Arch. 14. Biol. Ph. 17. Arch. 18. Ann. Ph. 17. Arch. 18. Ann. Ph. 17. Arch. 18. Ann. Ph. 21. Org. 22. (1934).	Centrano: Gynar. Chem. Abstr. Physiol. Abstr. J. Obst. & Gynaec. (British)
16. THYROID	wurna hr. hr. hr. hr. hr. hr. siol. (d. Soc. Patl Siol. (d. Nochkin. WcChir L. Siol. (d. Siol. (d. Nochkin. A. W.	ulation of these data yielded 537 reterences to 73 journals.

zı. VITAMINS	Rank Journal % ref.	, I Dial Cham		3. Proc. Soc. Exper. Biol. and Med.	4. J. A. M. A	5. Lancet	6. Pub. Health Rep 56.3	7. Brit. M. J	9. Am. J. Dis. Child.	9. Biochem. Ztschr	10. Arch. f. d. ges. Physiol	II. Ztschr. f. Physiol. Chem	12. 5p. Rep. Sel., Med. Res. Council	13. I. Path, and Bact.	13. Science	14. Compt. rend. Acad. des Sc	14:	15.	16. J. Am. Chem. Soc	17. J. Physiol.	18. Froc. Roy. Soc. Med 70.7	19. Klin. Wchnschr.	105 others (21.6%)		on the present status of the knowledge of	the vitamins," by various authors (A. IVI. A.,	knowledge" published under the direction	of the Medical Research Council of Great	Britain (His Maj.'s stat. off., 1932). Tab-	uration of these data yielded 1809 references to 130 journals.	Abstract source for this field:	Nutr. Abstr. & Rev.		
20. NUTRITION	Rank Journal % ref.	Biol Cham			4. Blochem. J 41.0 5. Proc. Soc. Exper. Biol. and Med. 45.0			o. I. Physiol.			Arch. Int. Med.	Fnysiol. Kev	13. J. Apric. Research 64.4	J. Clin. Investigation		Arch. f. d. ges. Physiol	Bull. Soc. Chim. Biol	Indian J. M. Research		17. Min. Wennschr 71.2	1/1 INEW Eligiand J. Med	Ztschr. f. Biol.		Data from the J. Nutr., vols. 7, 8, 1933-34.	Labulation of these data yielded 1508 refer-	Abstract source for this field:	Nutr. Abstr. & Rev.							
19. NERVOUS AND MENTAL DISEASES	Rank Journal Govef.	reh Named and Danahiat	2. Zentralbl. f. d. ges. Neurol. u.		3. J. A. M. A		Nervenheilk.	7. Bev. Neurol.	8. Am. J. Physiol. 48.4		sychiat. u. Neurol.		TI. Minchen med Wchnschr		in Nerv. and Ment.	Dis 62.6	Deutsche med. Wchnschr	ι. Wchnschr.	Lancet	Med. Rec	14: New Eligiand J. Med 69.0	Internat. Ztschr. f. Psychoanal.	Med. Klin.	Surg., Gynec. and Obst	61 others (26.6%)	ra & Mont Die	79-81, 1934-35. Tabulation of these data		Abstract sources for this field:	Fsychol, filter (suspended) Psychol, Abstr.	J. f. Psych. u. Neur.	J. Nerv. & Ment. Dis. Arch Neur & Psychiatry	Neurol. Zentralbl.	Zentralbl. f. d. ges. Neurol. u. Psychiat.

24. GROWTH AND DEVELOPMENT Rank Journal % ref. 2. Am. J. Dis. Child. 12.4 2. Am. J. Physiol. 12.7 3. J. A. M. A. 22.7 4. Am. J. Physiol. 22.7 5. J. Exper. Med. 22.7 6. Am. J. Anat. 22.7 7. J. Biol. Chem. 39.1 8. Endocrinol. 39.1 9. Anat. Rec. 39.1 9. Anat. Rec. 44.9 10. Proc. Soc. Exper. Biol. and Med. 48.2 11. Arch. Int. Med. 55.4 12. J. Immunol. 55.4 13. Ergeb. d. inn. Med. u. Kinderh. 55.4 14. Klin. Wehnschr. 56.9 15. Science 50.7 16. Zischr. f. Schulgesundhpfig. 62.2 17. Pub. Health Rep. 63.2 18. Arch. Rinderh. 65.0 18. Arch. Kinderh. 65.0 19. Arch. Kinderh. 65.0	tion during first three years," by Bayley and Davis (Biometrika, 27: 26, 1935). Tabulation of these data yielded 678 references to 99 journals. Abstract sources for this field: Child. Devel. Abstr. Am. J. Dis. Child. [Listings for Diseases of Children]
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22. GASTRO-ENTEROLOGY cum. Rank Journal % ref. 1. J. A. M. A. 2. Am. J. Dig. Dis. and Nutr. 3. Am. J. Surg. 4. Am. J. Physiol. 5. Arch. Int. Med. 6. Lancet 7. Am. J. Wisc. 8. Am. J. M. Sc. 9. Am. J. M. Sc. 9. Am. J. M. Sc. 10. Arch. J. Weedrgenol. 11. Surg., Gynec. and Obst. 12. Arch. f. Verdauungskr. 13. Arch. f. Verdauungskr. 14. Arch. Surg. 15. Arch. f. Webnschr. 16. Guy's Hosp. Rep. 17. Guy's Hosp. Rep. 18. South. M. J. 19. South. M. J. 10. Quart. J. Med. 11. Arch. Ges. 12. Arch. f. ges. exper. Med. 13. Arch. Goand. 14. Addiology 15. Acta Chir. Scand. 16. Quart. J. Med. 17. Australia 18. München med. Wchnschr. 19. Muschen med. Wchnschr. 19. Physiol. Rev. 19. Physiol. Rev. 19. Australia 19. Australia 19. Physiol. Rev. 19. Physiol. Rev. 19. Data from Oxford Medicine; Emery, New.	Arch. Int. Med., 56: 797 (1935); Rehfuss, Progressive Medicine, vol. 4 (1931); Rev. Gastroenterol., vols. 1 & 2, 1934-35; Am. J. Dig. Dis. & Nutr., Sept., 1935. Tabulation of these data yielded 524 references to 73 journals. Abstract sources for this field: Rev. Gastroenterol. Arch. f. Verdauungskr. Arch. des Mal. de l'App. Dig.

27. UROLOGY	Rank	r. I. Urol.	2. J. A. M. A.	3. Surg., Gynec. & Obst	4. Ann. Surg.		7. Brit. M. J.	8. Am. J. Surg.	9. New England J. Med	To. Urol. & Cutan. Rev.	12	13. Arch. f. klin. Chir.	14. Arch. Surg.	14. J. Biol. Chem.	14. Klin. Wchnschr	15. Brit. J. Surg.	15. Med. Rec.		17. Brit. J. Urol.	17. Tr. Am. A. Genito-urin Sura		55 others (27.1%) rd		61	8	Internat Abett Cour		Urol. & Cutan. Rev.	J. d'Urol.					
26. INDUSTRIAL HYGIENE	_	I. J. Indust. Hyg.			4. Pub. Health Bull.					7. M. J. Australia 44.2 8. Minchen med Webnschr	9. I. Biol. Chem.	Deutsche med. Wchnschr.							12. Am. I. Physiol				Klin. Wchnschr.	14. Am. J. Hyg 65.3	14. Ztschr. f. Krebsforschung		52 others (30.6%) 99.2	Data from the J. Indust. Hyg., vols. 14-15,	1932-33. Tabulation of these data yielded	646 references to 80 journals.	Abstract sources for this held:	J. Indust. Hyg. Buk Hoolth Family Alista	Pub. Health Engin, Abstr. Ribliog Indust Him	Zentralbl. f. Gewerbehyg.
25. PUBLIC HEALTH AND HYGIENE	Rank Journal % ref.	I. Am. J. Hyg 11.8	1-1-1		4. J. Exper. Med 36.1	r. Biol. and Med.	Pub. Health Rep.	7. J. Bact 46.3		9. Am. Rev. Tuberc.	10. Am. J. Trop. Med 55.1		II. Lancet 58.6			62.8	Science	05.4	16. Am. J. Dis. Child.	68.5	Compt. rend. Acad. des Sc 69.4		1/1 J. 11y 8 71.2	72.1			and the Am. J. Pub. Health, vol. 24, 1934.	Tabulation of these data yielded 871 refer-	ences to 90 journals.	Abstract sources for this field:	Auch f Schiff Transmitter	Pub. Health Engin Abet:	Zentralbl. f. d. ges. Hvo.	.96

PART 2

The foregoing Tables (1-27) answer primarily the needs of the specialist in his attempt to keep adequately abreast of the literature in his field. Two further Tables have been compiled, to indicate to the medical library and the librarian (A), the indispensable periodicals for all the fields consulted; (B), a short list of essential periodicals in general medicine which cover a large amount of material. This latter list is designed primarily for the individual and for the small library.

The first, or "A" List, was derived by listing in alphabetical order the first six periodicals in the Tables for the various fields. These were chosen because in most cases they include general and clinical periodicals as well as those specializing in the fields in question. They contain an average of 46 per cent. of all the useful material in the various fields. The numbers at the right of the titles indicate the rank of the periodical in each field. For example, the American Journal of Diseases of Children ranks 19th in usefulness to those interested in gynecology and obstetrics, and first to those interested in children's diseases and in children's growth and development.

The second, or "B" List, containing the minimum number of essential periodicals in the field of general medicine, was obtained by ranking periodicals of the "A" List according to the frequency of occurrence in certain fields. The fields used were those of anesthesia and analgesia, surgery, bacteriology, cancer, roentgenology, cardiology, hematology, dermatology and syphilology, otolaryngology, endocrinology, gynecology and obstetrics, nervous and mental disease, gastro-enterology, diseases of childhood, public health and hygiene, and urology. The other headings in Tables 1–27 were omitted in order not to overweight certain fields. This list should at least help to solve the problem of "what to buy" for a small library.

(Text continued on p. 188)

Urology	
Indust. Med.	
Pub. Hith. & Hyg.	
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Growth & Develop.	
Dis. of Children	
Gastro-Enterol.	
Vitamins	
Nutrition	
Nerv. & Ment. Dis.	
Gynec, & Obstet.	
Şex	
Thyroid	
Diabetes	
Endocrinology	
Otolaryngology	
Allergy	
Dermat. & Syphil.	
Hematology	
Cardiology	4 0
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" A" LIST TABLES 28 AND 29	radiol. Heart J. J. Anat. J. Cancer. Dis. Dis. Evild. Hyg. M. Sc. J. Obst. & Cynec. J. Physiol. Physiol. Physiol. Physiol. Physiol. Physiol. Prop. Med. Rec. Georgenol. Surg. Trop. Med. Rec. Georgenol. Surg. Trop. Med. Rec. Rec. Rec. Rec. Georgenol. Factor Rec. Rec
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"B" LIST

Rank Journal	Rank Journal
1. J. A. M. A.	7. Virchows Arch. f. path.
2. Lancet	Anat.
3. Arch. Int. Med.	8. J. Exper. Med.
3. Brit. M. J.	9. Arch. f. Gynäk.
4. Am. J. M. Sc.	9. C. R. Soc. de Biol.
4. Klin. Wchnschr.	10. Am. J. Dis. Child.
4. München. med. Wchnschr.	10. Am. J. Roentgenol.
5. J. Biol. Chem.	10. Am. J. Surg.
5. New England J. Med.	10. Zentralbl. f. Gynäk.
5. Surg., Gynec. & Obst.	11. Arch. f. klin. Chir.
6. Am. J. Physiol.	11. Arch. Neurol. u. Psychiat.
6. Proc. Soc. Exper. Biol. &	11. J. Clin. Investigation
Med.	11. J. Immunol.
7. Ann. Surg.	11. J. Infect. Dis.
7. Arch. Surg.	11. J. Urol.

SUMMARY

A total of some 26,760 references were tabulated, and on the basis of the tabulations 230 periodicals were ranked according to their usefulness in relation to 27 different medical subjects. These 27 lists comprise an average of 75 per cent. of the material in these fields; and, it is believed, furnish a dependable guide to all the important periodicals in those subjects.

Those ranking among the first six titles of these lists on various medical subjects have been arranged alphabetically in Tables 28–29 to form the "A" List. A shorter list ("B"), of the most essential periodicals for general medicine, has also been compiled. This list, the "A" List, and the lists for the special fields should furnish a sound basis for the selection of periodicals for medical libraries.

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