

of truth and apparently of no commercial value, nevertheless laid the foundations of electrical engineering. If we can disseminate such knowledge, which is capable of the easiest demonstration and the most striking illustration, we can multiply the friends of pure science and secure new and larger endowments for physics, chemistry and other fundamental subjects.

[While there can be no doubt of the importance of emphasizing the value of industrial research, the necessity of vigilance in the interests of pure science is shown by the opposite tendency of several recent writers, who measure science solely in terms of its applicability in the arts.

The stimulus of commercial rivalry is doubtless a factor in the rapid progress of our great industrial laboratories, but I doubt if their directors would maintain that all chemical research should be of the industrial kind. Immediate commercial value as a criterion of success will not often point the way to the discovery of fundamental laws, though these are by far the richest source of ultimate achievement, practical as well as theoretical. Modern electrical engineers do not forget the investigations of Faraday and Hertz in pure science, nor do leading industrial chemists overlook the researches of Gibbs, van't Hoff, and others, which brought them no practical returns, but rendered many modern industries possible. Exclusive attention to industrial research means nothing more or less than the growth of the superstructure at the expense of the foundations. Industrial laboratories are able to offer large salaries and other tempting promises of material advantages, and thus to draw the most promising men from the universities. But while these laboratories should be strongly encouraged, and multiplied to the point where every small manufacturer will

realize the value of research methods, this should not be done at the serious expense of pure science. Germany's success on the industrial side is primarily due to her still greater achievements in the university laboratories. The National Academy, by helping to maintain the two phases of American research in stable equilibrium, can perform a service which the truest advocates of applied science will recognize as essential to sound progress.]

GEORGE ELLERY HALE

THE MOUNT WILSON

SOLAR OBSERVATORY

(*To be continued*)

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#### UNIVERSITY REGISTRATION STATISTICS

THE registration returns for November 1, 1914, of thirty of the universities of the country will be found tabulated on a following page. These statistics show *only* the registration in the universities considered. There is no intention to convey the idea that these universities are the thirty largest universities in the country, nor that they are necessarily the leading institutions.

The largest gains in terms of student units, including the summer attendance, but making due allowance by deduction for the summer-session students who returned for instruction in the fall, were registered by Columbia (1,365), California (1,109), Pittsburgh (1,069), Ohio State (832), Wisconsin (806), Harvard (784), New York University (634), Minnesota (552), Pennsylvania (536), Illinois (405), Nebraska (349), Cornell (327), Cincinnati (319) and Michigan (311).

Last year there was none that showed a gain of more than 1,000 against four this year, and ten institutions showed gains of more than 300 against fourteen of this year. They were: New York University, Illinois, Columbia, Wisconsin, Pennsylvania, California, Iowa, Ohio State, Chicago and Michigan. There is a theory that universities and colleges have larger increases than usual when national economic conditions are bad, that is during

"hard times." The above seems to bear out this theory.

The only university which shows a decrease in the grand total attendance, including the summer-session, is Indiana. Exclusive of the summer-sessions two other universities show a very slight decrease, Tulane and Kansas.

Omitting the summer-sessions the largest gains for 1914 are Pittsburgh (1,069), Ohio State (687), New York University (580), Pennsylvania (431), Wisconsin (424), California (389), Columbia (349), Minnesota (324), Cincinnati (319), Cornell (318), Illinois (302), Nebraska (297), Harvard (239) and Michigan (218).

Two show gains of more than 900. There were none last year. Fourteen show gains of more than 200 as against twelve last year. Of the fourteen, eight are in the west and six in the east.

According to the figures for 1914, the thirty institutions, inclusive of the summer-sessions, rank as follows: Columbia (11,294), California (8,180), Chicago (7,131), Wisconsin (6,696), Pennsylvania (6,505), Harvard (6,411), Michigan (6,319), New York University (6,142), Cornell (5,939), Illinois (5,664), Ohio State (4,943), Minnesota (4,484), Northwestern (4,072), Syracuse (3,913), Missouri (3,385), Texas (3,371), Yale (3,289), Nebraska (3,199), Pittsburgh (2,975), Iowa (2,768), Kansas (2,650), Tulane (2,441), Cincinnati (2,190), Indiana (2,163), Stanford (1,893), Princeton (1,641), Western Reserve (1,523), John Hopkins (1,374), Washington University (1,345), Virginia (902); whereas last year the order was: Columbia, California, Chicago, Michigan, Pennsylvania, Wisconsin, Harvard, Cornell, New York University, Illinois, Ohio State, Minnesota, Northwestern, Syracuse, Yale, Missouri, Texas, Nebraska, Kansas, Iowa, Tulane, Indiana, Pittsburgh, Cincinnati, Stanford, Princeton, Western Reserve, Johns Hopkins, Washington University and Virginia.

A comparison shows that the following seventeen universities hold the same relative positions (indicated by the numerals following the name) as was held last year. Columbia (1), California (2), Chicago (3), Penn-

sylvania (5), Illinois (10), Ohio State (11), Minnesota (12), Northwestern (13), Syracuse (14), Nebraska (18), Iowa (20), Stanford (25), Princeton (26), Western Reserve (27), Johns Hopkins (28), Washington University (29) and Virginia (30). On the other hand, there are several changes: Wisconsin comes up to fourth place, passing Michigan and Pennsylvania. Harvard advances one place and Michigan is crowded out of fourth to seventh place. Cornell yields eighth place to New York University. The next change shows Missouri and Texas advancing one place each to fifteenth and sixteenth, respectively, and Yale dropping behind them. Next comes Nebraska and then Pittsburgh, which shows the greatest advance, coming all the way from the twenty-third position to the nineteenth. Iowa holds its own at the twentieth place and is followed by Kansas, which has slipped back two notches. Tulane twenty-second this year, and last year twenty-first, is followed by Cincinnati, which has advanced one place, and then by Indiana, which last year held the twenty-second place. The remaining six schools hold the same places held last year.

If the summer-session enrollment be omitted the universities in the table rank in size as follows: Columbia (6,752), Pennsylvania (5,736), California (5,614), Michigan (5,522), New York University (5,415), Harvard (5,161), Illinois (5,137), Cornell (5,078), Wisconsin (4,874), Ohio State (4,395), Northwestern (3,941), Minnesota (3,940), Chicago (3,887), Syracuse (3,739), Yale (3,289), Pittsburgh (2,975), Nebraska (2,779), Missouri (2,682), Iowa (2,449), Texas (2,447), Kansas (2,304), Cincinnati (2,190), Stanford (1,888), Princeton (1,641), Indiana (1,570), Western Reserve (1,523), Washington University (1,345), Tulane (1,223), Johns Hopkins (1,058), Virginia (902); whereas last year the order was: Columbia, Pennsylvania, Michigan, California, Harvard, Illinois, New York University, Cornell, Wisconsin, Northwestern, Chicago, Ohio State, Syracuse, Minnesota, Yale, Missouri, Nebraska, Texas, Kansas, Iowa, Pittsburgh, Cincinnati, Stanford, Princeton,

Indiana, Western Reserve, Tulane, Washington University, Johns Hopkins and Virginia.

This comparison shows that the relative positions of thirteen of the universities remain unchanged, although only in the case of one institution, Pittsburgh, is the change of more than passing interest. The others shift about as follows: Michigan yields to California, while New York University passes Harvard and Illinois. Northwestern and Chicago now follow Ohio State instead of preceding it as in the past. Minnesota passes Chicago and Syracuse, and the latter is followed by Yale. Pittsburgh leaps to the sixteenth position, passing Missouri, Nebraska, Texas, Kansas and Iowa. Nebraska and Missouri exchange places and Iowa goes ahead of Texas and Kansas. The remaining schools hold the same relative positions with the exception of Washington University and Tulane, which change about.

While on the subject of the change in the relative positions of the universities, based on their registration statistics, it may be of some interest to briefly point out the change in 1914 from the positions held in 1904.

At that time the twenty-seven institutions then considered, inclusive of the summer-session, ranked as follows:

- |                      |                          |
|----------------------|--------------------------|
| 1. Harvard.          | 10. Pennsylvania.        |
| 2. Columbia.         | 11. Yale.                |
| 3. Chicago.          | 12. Northwestern.        |
| 4. Michigan.         | 13. Nebraska.            |
| 5. Minnesota.        | 14. Syracuse.            |
| 6. Cornell.          | 15. New York University. |
| 7. California.       | 16. Ohio State.          |
| 8. Wisconsin.        | 17. Missouri.            |
| 9. Illinois.         | 18. Iowa State.          |
| 19. Kansas.          |                          |
| 20. Stanford.        |                          |
| 21. Princeton.       |                          |
| 22. Indiana.         |                          |
| 23. Tulane.          |                          |
| 24. Texas.           |                          |
| 25. Western Reserve. |                          |
| 26. Johns Hopkins.   |                          |
| 27. Virginia.        |                          |

Comparing this ranking with that of 1914 shown above, it should be noted that generally speaking the relative positions of the universities have changed but little. By dividing all of the universities considered in 1904 into three equal groups, and by comparing these groups with a similar grouping for 1914, it

will be seen that each group has a tendency to hold its membership; in other words, universities in group I. in 1904 are almost certain to be found in group I. in 1914, those in group II. in 1904 are almost certain to be found in group II. in 1914, and those in group III. in 1904 are almost certain to be found in group III. in 1914. There are, however, several exceptions to this rule. Minnesota ten years ago occupied fifth position in group I. and is now occupying twelfth position, or the second position in group II. Pennsylvania headed the second group ten years ago and is now occupying fifth position in the first group. New York University has changed from the fifteenth position to the eighth, that is, from the second group to the first, in the same period. The only other change is that of Texas from the third to the second group.

Changes in the position of the universities within each group are not considerable. Harvard holding the ranking position ten years ago, now has the sixth place, whereas Columbia has taken the lead, with California following. Michigan has gone from the fourth to the seventh position. Yale has dropped from the eleventh to the seventeenth position, and Ohio State has advanced into its place, and Nebraska has dropped back from the thirteenth to the eighteenth position. There are no decided changes in the third group. All of which suggests the conclusion that the increase in attendance of these universities tends to be proportionately equal. This may be discussed more fully in another article.

Including the summer session attendance, the largest gains in the decade from 1904 to 1914 were made by Columbia (6,461), California (4,442), New York University (3,762), Pennsylvania (3,477), Wisconsin (3,326), Ohio State (3,185), Chicago (3,096), Texas (2,441), Michigan (2,319), Illinois (2,295), Cornell (2,106).

Considering, now, the individual schools of the various universities, California with 1,238 men and 1,853 women, leads in the number of college undergraduates, being followed by Harvard, with 2,479 men and 603 women (Radcliffe College); Michigan, with 1,802 men

and 780 women; Wisconsin, with 871 men and 874 women; Columbia, with 1,014 men and 689 women; Chicago, with 911 men and 746 women; Minnesota, with 816 men and 905 women; Texas, with 817 men and 651 women; Yale, with 1,437 men; Kansas, with 776 men and 626 women; Nebraska, with 650 men and 761 women; Missouri, with 829 men and 562 women; Syracuse, with 1,330 men and women; Princeton, with 1,327 men; Indiana, with 778 men and 461 women; Cornell, with 926 men and 279 women, and Northwestern, with 522 men and 653 women. In the scientific schools, that is the schools of engineering, Illinois takes the lead with 1,406 students, followed by Cornell with 1,363, Michigan with 1,347, Yale with 1,056, Pennsylvania with 906, Ohio State with 851, Wisconsin with 796, California with 763, Minnesota with 590, Columbia with 461, Cincinnati with 458, Kansas with 427, and Stanford with 418; and in the law schools Harvard takes the lead with 716 students, followed by New York University with 715, Michigan with 499, Columbia with 440, Pennsylvania with 356, Texas with 343 and Northwestern with 336.

The largest medical school is now in the east at New York University where 439 students are registered in this subject. Michigan follows with 378 students, Johns Hopkins with 374, Columbia with 358, Tulane with 343, Harvard with 321, Pennsylvania with 290, Illinois with 287 and Ohio State with 281. Columbia has the largest non-professional graduate school with 1,689 students, far outnumbering Chicago with 598, Harvard with 512, Pennsylvania with 489, California with 478, New York University with 376, Yale with 371, Illinois with 340 and Cornell and Wisconsin with 321 each. Cornell holds the lead in agriculture with 1,535 students, followed by Wisconsin with 1,091, Ohio State with 973 and Illinois with 959. Four of the universities report courses in architecture. Of these Cornell is the leader with 157 students in this branch, followed by Michigan with 145, Columbia with 110 and California with 16. Harvard, Illinois, Kansas, Minnesota, Ohio State, Pennsylvania, Syracuse, Texas, Tulane and

Washington University have registered students in architecture, but listed in other departments. In art Syracuse leads with 150 students and is followed by Washington University. Although courses in art are given at California, Iowa State, Michigan and Northwestern, the students are counted in other departments.

With 2,466 students New York University's School of Commerce is in the lead, numerically speaking; Pennsylvania has the next largest with 1,615 students; following comes Pittsburgh with 790, Northwestern with 645, Wisconsin with 469, Illinois with 376 and California with 287. In this connection it may be of interest to note that the largest school is in the east and that the schools succeed each other in numbers following their geographical location toward the west. In dentistry Pennsylvania holds the lead with 663 students, followed by Northwestern with 578, Michigan with 318 and Iowa State with 302. Of the four divinity schools, Northwestern continues leader with 216 students, as against Chicago's 152, Yale's 112 and Harvard's 59. Syracuse's School of Forestry attracts 242 students this year, Nebraska 43, Yale and Minnesota 37 each. With 136 students in journalism Columbia leads, followed by New York University with 110, Wisconsin with 101, Missouri with 76 and Indiana with 67. Syracuse has 960 music students, and is followed by Northwestern with 400 and Indiana with 100. Columbia has by far the largest school of education, enrolling 1,817 students as compared with Pittsburgh's 668, New York University's 383, Syracuse's 343 and Ohio State's 341. The largest school of pharmacy is at Columbia where 495 students are enrolled. With 200 students Pittsburgh follows and then comes Illinois with 199, Western Reserve with 120 and Michigan with 110. There are only four universities on the list teaching veterinary medicine. These are Ohio State with 182 students, Pennsylvania with 122, Cornell with 116 and New York University with 15.

All of the above figures are for the individual schools and are exclusive of the sum-

mer-session attendance. The largest summer-session in 1914 was at Columbia, where 5,590 students were enrolled, as against 3,983 at Chicago, 3,179 at California, 2,602 at Wisconsin, 1,594 at Michigan, 1,436 at Cornell, 1,250 at Harvard, 1,218 at Tulane and 1,205 at Texas.

Of the 145 students in architecture at the University of California the 16 students listed are graduates only. There are besides 129 who are undergraduates in the college and these are included in the college statistics. In art are registered 213 students but these are included in extension and similar courses. The 936 students in education are included in the college statistics. Forestry and veterinary medicine are included in the School of Agriculture, and music in the College of Liberal Arts. The extension courses show the following registration: San Francisco Institute of Art, 213; Wilmerding School of Industrial Art, 145; University Farm School, Davis, 267; short courses in agriculture, 170; correspondence, 1,996; correspondence work in the state prisons, 153; class work, 538; and class work in state prisons, 608.

Under other courses are listed at the University of Chicago 881 students, all of whom are taking work in regular university classes meeting Saturday morning and late in the afternoon of the other week days. These classes are given primarily for teachers who are working for baccalaureate and for advanced degrees.

At the University of Cincinnati a school of household arts of college grade was opened this year. An advance in entrance requirements to the Medical College has reduced the classes for several years but the turn of the tide has commenced and the entering class this year is larger than that of recent years.

Of the 1,817 students classified under education at Columbia University 921 are in the School of Education and 896 in the School of Practical Arts. The decrease in the number of students in the Schools of Mines, Engineering and Chemistry is caused by the fact that these schools have been placed on a graduate basis. Students are now required to hold a bachelor's degree or the equivalent, in-

cluding several elementary courses in the sciences.

At Cornell University 534 registered in the winter course in agriculture are listed under extension courses.

The Graduate School of Applied Science at Harvard University is in a state of transition, owing to the cooperative plan with Massachusetts Institute of Technology.

Of the 379 registered in other courses at the University of Illinois, 333 are registered under household science and 46 under library economy.

The total attendance at the University of Iowa, including all departments but excluding the summer-session, is divided into 1,706 men and 797 women.

Of the 374 in the School of Medicine at Johns Hopkins University 361 are registered for the degree of Doctor of Medicine and 13 are taking special courses for physicians. There are 170 students registered in the college courses for teachers given in the afternoons. The department of engineering is only in its third year and all but a small number, that is the third year men, are pursuing courses in the undergraduate college. No record is made this year of the number.

There are 154 students registered in education at the University of Kansas, but all but one of these are listed in other schools of the university.

Of the 1,492 students in the Scientific Schools in the University of Michigan, 1,347 are in engineering and 145 in architecture. The 535 officers include 30 non-resident lecturers and summer-session appointees for the college, 128 graduate assistants, and 23 administrative officials not included elsewhere.

The registrations at the University of Minnesota are incomplete, due to the fact that the short courses, particularly in agriculture, have not been started. These registrations will increase the total mentioned under extension and similar courses.

The figures for the University of Missouri include the enrollment in all schools at Columbia and in the Schools of Mines and Metallurgy at Rolla. The School of Commerce,

which was organized last spring and requires two years of college work for admission, has an enrollment of 12. The decrease in the enrollment of the scientific schools is due to an increase in the admission requirements, since 1911, to two years of college work. Forestry is given in the College of Agriculture.

Of the 282 students in other courses at Northwestern University 110 are enrolled in courses for nurses, and 172 in the School of Oratory. The summer-session in arts was reorganized and the increase the last year was 30 per cent. The Law School is enjoying the largest registration in its history despite the fact that this year the entrance requirements were increased to one year of college work for those twenty years of age and under. The School of Pharmacy has raised its requirements from one year of high school to high school graduation and this increase has cut down the registration from more than 200 in former years to 74 this year. After three years of steady decrease, due to the increase in requirements, the medical school registration shows an increase. The freshman class this year was 83 per cent. larger than that of last year.

Of the 463 men registered in the college of New York University 298 are in the College of Arts and 165 in Washington Square College. The course in journalism is included in the School of Commerce. Under other courses is listed the woman's law class with an enrollment of 50.

This year for the first time the registration statistics of Ohio State University include the enrollment in dentistry and medicine. The latter includes homeopathic medicine. Home economics mentioned under other courses has a registration of 234 and optometrics has a registration of 9.

The University of Pennsylvania, which now enters on its 175th year, shows in the Dental School an enrollment of 663 students, the largest in the history of the school. The School of Education has begun a separate existence with an enrollment of 89, and the Law School shows a decrease of 25. This is the last year for admission to this school without the B.A.

degree or its equivalent. The Medical School, which in former years has suffered losses due to the gradual annual increase in the admission requirements, for the first time in seven years shows an increase. There is a slight increase in the department of mechanical and electrical engineering, now separate schools of engineering. The extension courses given at Wilkes-Barre, Scranton, Harrisburg and Reading have a total registration of 564. The Wharton School of Finance enrolls its largest freshman class this year, but, on the other hand, the School of Veterinary Medicine shows a loss because of an increase in the admission requirements to two years of high school work. In the medical and dental departments women have been admitted this year for the first time, three and two respectively being registered. The 743 students in other courses are divided between the college courses for teachers with an enrollment of 727, and courses in hygiene with 16.

The large increase in the University of Pittsburgh is due in part to the improved methods of publicity employed by the university, but mostly to the increase in public interest caused by the general campaign for funds last winter. Of the 304 students in engineering, 226 are registered in the School of Engineering, and 78 in the School of Mines.

Of the 198 students enrolled in other courses at Syracuse University 50 are regular students in architecture, and 63 in *belles lettres*, 20 in photography, and 65 in the School of Oratory. The latter was established last year with a four-year course. The decrease in the College of Law was due to the increase in entrance requirements, which ask now one year of regular college work. Twenty students listed under extension courses took work in the short winter course in agriculture. In connection with New York State College of Forestry of Syracuse University, a forest ranger school is maintained.

The 44 students under other courses at the University of Texas are students in the School for Nurses.

At Tulane University of Louisiana there may be some duplications between the summer-

	California	Chicago	Cincinnati	Columbia	Cornell	Harvard (Inc. Radcliffe)	Illinois	Indiana	Iowa State	Johns Hopkins	Kansas	Michigan	Minnesota	Missouri	Nebraska	New York Uni- versity	Northwestern	Ohio State	Pennsylvania	Pittsburgh	Princeton	Stanford	Syracuse	Texas	Tulane	Virginia	Washington University	Western Reserve	Wisconsin	Yale
College, Men.....	1238	911	247	1014	926	2479	505	778	1358	294	776	1802	816	829	650	463	522	610	438	411	1327	663	1330	817	162	415	173	434	871	1437
College, Women.....	1853	746	491	689	279	603	426	461	240	†	626	780	905	562	761	247	653	389	18	160	427	418	300	651	197	220	220	416	874	...
Scientific Schools*	763	...	458	461	1363	120	1406	295	240	...	427	1347	590	334	299	261	84	851	906	304	139	418	300	275	149	94	211	...	796	1056
Law.....	134	213	...	440	235	716	112	77	101	...	142	499	171	100	193	715	336	206	356	154	...	177	255	343	83	256	103	96	168	142
Medicine.....	128	200	80	358	151	321	287	149	144	374	51	378	213	75	156	439	196	281	290	107	...	73	99	185	343	107	78	174	96	50
Non-professional schools.....	grad.	478	598	138	1689	321	340	105	115	230	104	258	169	163	190	376	107	165	489	43	175	130	130	75	18	42	45	17	321	371
Agriculture.....	540	...	...	1535	...	...	959	...	...	...	...	...	598	536	436	...	...	973	...	...	...	...	101	56	...	...	...	1091	...	...
Architecture.....	16	...	...	110	157	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Art.....	†	...	8	...	...	...	...	59	...	...	19	...	...	...	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Commerce.....	287	170	180	...	...	147	376	...	...	...	...	...	...	12	150	2466	645	1615	790	...	...	...	150	...	...	...	...	...	...	...
Dentistry.....	112	...	...	...	...	204	84	...	302	...	...	...	253	...	...	...	578	126	663	227	...	...	...	74	112	...	...	...	...	...
Divinity.....	...	152	...	...	...	59	...	...	...	...	...	...	...	...	...	...	216	...	...	...	...	...	...	...	...	...	...	...	...	...
Forestry.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Journalism.....	...	...	...	136	...	...	...	67	...	...	...	...	...	...	...	...	...	...	...	...	...	...	242	...	...	...	...	...	...	...
Music.....	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pedagogy.....	†	...	...	1817	...	...	68	100	...	...	94	...	...	...	...	...	400	...	32	...	...	...	960	84	16	...	...	...	101	...
Pharmacy.....	...	262	224	...	...	...	...	210	...	...	1	...	...	94	189	196	383	341	89	668	...	...	343	421	85	...	...	...	46	...
Veterinary Medicine	95	...	...	495	...	...	199	...	62	...	64	110	97	...	23	15	74	182	122	200	...	...	...	57	8	...	...	...	...	...
Other Courses.....	...	...	...	...	116	...	...	...	...	...	...	...	...	...	...	50	282	243	743	...	...	...	263	44	...	...	...	...	...	...
Deduct Double Registra- tion.....	30	246	197	460	5	...	4	739	54	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	5614	3887	2190	6752	5078	5161	5137	1570	2449	1058	2304	5522	3940	2682	2779	5415	3941	4395	5736	2875	1641	1888	3739	2447	1223	902	1345	1523	4874	3289
Summer Session 1914.....	3179	3983	...	5590	1436	1250	938	855	489	356	562	1594	867	956	606	938	245	926	983	...	...	14	296	1205	1218	...	...	...	2602	...
Deduct Double Registra- tion.....	613	739	...	1048	575	...	411	262	170	40	216	797	323	253	186	211	114	392	215	...	...	9	122	281	...	...	...	...	780	...
Grand Total 1914.....	8180	7131	2190	11294	5939	6411	5604	2163	2768	1374	2650	6319	4484	3385	3199	6142	4072	4943	6504	2975	1641	1893	3913	3371	2441	902	1345	1523	6696	3289
Grand Total 1913.....	7071	6834	1871	9929	5612	5627	5259	2271	2542	1311	2610	6008	3932	3135	2850	5508	3877	4111	5968	1906	1599	1756	3845	3106	2298	885	1225	1370	5890	3263
Grand Total 1911.....	6031	5914	1423	8642	6041	5511	5217	2418	2081	1075	2448	5977	4783	2780	2877	4178	3481	3877	5400	1543	1684	...	3408	2669	2128	804	1133	1331	5492	3224
Grand Total 1909.....	4084	5487	1372	6132	5028	5558	4502	2231	2246	710	2144	5259	4351	2589	3402	3843	3197	3012	4857	...	...	...	3248	2492	1882	767	964	1083	4245	3276
Grand Total 1904.....	3738	4035	767	4833	3833	5392	3369	1206	1460	740	1446	4006	3886	1704	2728	2380	2856	1758	3027	...	...	...	2452	930	1124	691	912	808	3370	3008
Extension and Similar Courses.....	4090	...	262	3841	534	10	...	296	...	...	313	309	830	210	775	1668	110	37	564	212	...	...	20	1072	47	...	...	...	3296	...
Officers.....	604	...	...	951	...	...	803	626	275	247	...	536	...	306	283	450	...	423	...	...	220	349	300	294	339	99	...	255	696	...

\* Includes Schools of Mines, Engineering, Chemistry and related subjects. † Included elsewhere. ‡ 1375 with 41 double registrations.

session enrollment and that of the regular term. These, however, were not recorded. The grand total, therefore, may not be comparable with the totals of other universities.

The 211 students in the scientific schools of Washington University are divided between courses in engineering and architecture, while 37 of the students in other courses are enrolled in the department of social economy and the remainder, 271, are enrolled in the Saturday courses for teachers.

Courses for teachers are offered this year in Western Reserve University, and 92 teachers in the public schools of Cleveland are enrolled. There are six students taking one class in the College for Women in connection with work in the Cleveland Art School. These are not included in the statistics.

The non-resident fee of the University of Wisconsin was increased from \$70 to \$100 a year, taking effect for the first time this fall. Despite this increase the total registration exclusive of the summer-session enrollment is 4,874 as against 4,450 last year.

The Yale University statistics in art do not include 86 enrolled in other departments. Of the 371 in the Graduate School, 89 are taking special teachers' courses. There are 67 students enrolled in other departments not included in the statistics for music. Yale University has no summer-session except for the regular summer work done in connection with certain classes in forestry and engineering. The principal changes in registration from last year are the increase in the College, School of Religion, Law School, and the decrease in the School of Fine Arts and the Sheffield Scientific School. In the School of Fine Arts the decrease is due to the new admission requirements and in the Sheffield School is due partially to the increase in tuition fees.

JOHN C. BURG

NORTHWESTERN UNIVERSITY

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CHARLES SEDGWICK MINOT, DECEMBER  
23, 1852–NOVEMBER 19, 1914

THE passing of a man like Minot leaves us, his friends, sad and filled with sorrow that so

significant a life should be thus swiftly ended. One feels as when he hears of some vanishing form—that just such a creature can hardly come again, for the personality of the unusual man is no less unique and he does not reappear. Yet so long as those who knew Minot live, so long as what he planned and thought persists to mould the purposes of those who follow, so long will his power stretch like the wave that seems to fade but really is extended.

Perhaps Minot was intimate with some men who were his seniors; I doubt not Henry Bowditch was his confidant, but among his contemporaries he seldom showed his thoughts or his emotions in the making. Such intimacies he did not cultivate.

Careful and scrupulous, even in the minor ways of life, the impression which he left was of a man always sensitive to his surroundings—keenly alive to the interests of the greater world, seeing life largely, but ever fastidious and fine in the formulation of the thoughts that occupied his active mind. All life for him was purposeful and very interesting. Few men, upon occasion, could speak more aptly in appreciation of a scientific friend.

Well balanced gifts of a high order, a sound training, stimulating social contacts and ample means were his. As one looks back over the past thirty-five years, Minot is to be found among the first movers in each effort for biological advance: everywhere he took part both with insight and with foresight. The beginnings of the Society of Naturalists—that first effort to bring the working biologists of the newer school together—find him in the van. The American Association for the Advancement of Science, the Marine Biological Laboratory are both indebted to him, and his administration of the Elizabeth Thompson fund remains a model of aid to the efficient.

The honors that belong to such a man came to him generously and steadily yet were always somehow transmuted into public service for the biological world. His European training in the early years included study in the never-to-be-forgotten laboratory of Carl Ludwig, and work with that solitary master, Ran-