Let this be said of him, once for all: 'He was a good man, good at many things, and now this also he has attained to, to be at rest.' That covers Sophocles and Shakespeare, Marlborough and Bonaparte. Let it serve for Stevenson; and, for ourselves, let us live and die uninsulted, as we lived and died before his books began to sell and his personality was a marketable thing."

Several English periodicals have been quick to resent the attitude which Mr. Henley has taken. Others have published communications from friends of Mr. Henley who have rallied to his defense. However, not one view entirely coincident with his own is to be found in any of them, altho their editorial utterance upon the matter is more temperate than that of the American journals. A writer in the London *Academy* (November 23) fairly represents the prevailing spirit shown in England. He says:

"Mr. Henley has done his worst for Stevenson. What is the result? What do we learn from him? That 'Stevenson was incessantly and passionately interested in Stevenson'; that 'no better histrion ever lived'; that in the years that Mr. Henley knew him Stevenson did not always practise what he preached; that he did not originate all the youthful pranks that his biographers have fathered upon him; that Mr. Henley spent himself more in the service of 'the Lewis that I knew and loved' than the world wots of, and that a candid friend, with a grievance against the biographee, does not make a convincing biographer.

"If Mr. Henley's article is a specimen of the 'new biography' from the pen of the friend who knows, then give us the official 'Life.' We have already said what we thought of Mr. Balfour's colorless but conscientious 'Life'; but that, in conjunction with the 'Letters' and Mr. Colvin's biographical chapters, gives, we believe, the true picture of the man. Mr. Henley's pages, with their trivial accusations of frailty, add nothing, prove nothing.

"Stevenson is beyond the reach of praise or blame. He was neither whole saint nor whole sinner, but, like most of us, something of both. He was a man of infinite variety. In early life his many-sided nature, his lively fancy, his eagerness for experience ran him hither and thither; later it settled into a broad, deep stream. He could always be kind, and just, and sympathetic in his estimate of others. That, his paper on 'Burns' shows. *He* knew how little we understand one another, how 'greatly dark' a man we have known even for thirteen years may be. Hear him:

"'Alas! I fear every man and woman of us is "greatly dark" to all their neighbors, from the day of birth until death removes them, in their greatest virtues as well as in their saddest thoughts; and we, who have been trying to read the character of Burns, may take home the lesson and be gentle in our thoughts.'"

The New York *Tribune's* London correspondent writes:

"The literary controversy excited over Mr. Henley's article on Stevenson is increasing in bitterness. Mr. Henley's numerous enemies are attacking him furiously as a treacherous, disloyal friend and jealous and malignant slanderer. Mr. Henley's friends are rallying to his defense and protesting against the indiscriminating glorification of Mr. Stevenson in progress for a long time. These passages at arms between blind enthusiasts and over-candid friends can not be described as among the amenities of literature, especially as there is an unpleasant speculation over a missing epithet of three letters applied to Mr. Stevenson by those who knew him well. Mr. Henley is primarily responsible for the noxious controversy over the Samoan grave, and some of his warmest admirers condemn the article."

In its editorial reference to the matter, the New York *Times* (November 25) calls the "attack" by Mr. Henley upon Stevenson "perhaps the most contemptible episode in the history of modern literature." The comment of the Detroit *Journal* (November 25) is:

"Of course, Mr. Henley can contend that he is doing good service to his friend's memory by painting him as Cromwell wished to be painted, 'warts and all,' but the world will jump to the conclusion that he is jealous of a dead man. Robert Louis Stevenson, his art, his culture, his ravishing style, died in the South Sea island. Writer after writer of the new school comes forward and confesses his debt to Stevenson, the man who first taught him to put his house in order. Everybody now confesses to his exquisite use of words, his picturesqueness, his insight into human nature, particularly into the finer shades of emotion, his sensitiveness to external impressions, and the beautiful precision of his language in describing them. No man ever touched the English language to finer issues. . . . The Stevenson cult is growing.

"This must all be very sour grapes for Mr. Henley, who in manner and diction apes his dead friend. Like Stevenson, he is a *précieuse;* like Stevenson, he revels in fine shades and delicate *nuances;* like Stevenson, he is a poet. He is cast in almost the same mold so far as esthetic taste goes; but, as a man, he has not the same heart, the same universal human sympathy. Mr. Henley in all the graces of style and thought and language is fit to be a classic, but he has missed being great because he is too finical to be entirely human. This is the apple of discord from which Mr. Henley suffers. He envies Stevenson the laurels of posterity. He can not get them. He puts himself on a level with our dear, vain, goo-goo-eyed little friend, Hall Caine, who said of Stevenson: 'He has contributed more to the form than to the thought of literature.' Such a thing from the mouth of a man who writes with his feet and thinks with the back of his neck is not surprising. But from an exquisite like Mr. Henley it is execrable."

THE BOOK BAROMETER.

CHANGES in the demands upon booksellers and libraries for current fiction were fewer in the month ending November 1 than in the preceding month (see THE LITERARY DIGEST, November 16). *The World's Work* (December) prints the appended lists, from which it appears that save for Kipling's "Kim," Weir Mitchell's "Circumstance," and Mrs. Catherwood's "Lazarre," there are no newcomers among the first ten of the dealers' list. That furnished by the librarians contains no new books in the first ten, altho the relative positions of these ten novels have changed somewhat since the last report:

BOOK-DEALERS' REPORTS.

1. The Right of Way—Parker.
2. D'ri and I—Bacheller.
3. The Eternal City—Caine.
4. The Crisis—Churchill.
5. Kim—Kipling.
6. Blennerhasset—Pidgin.
7. Cardigan—Chambers.
8. Circumstance—Mitchell.
9. Lazarre—Catherwood.
10. Graustark—McCutcheon.
11. Tristram of Blent—Hope.
12. The Cavalier—Cable.
13. Captain Ravenshaw—Stephens.
14. New Canterbury Tales—Hewlett.
15. The Making of a Marchioness—Burnett.
16. The Red Chancellor—Magnay.
17. The Puppet Crown—McGrath.
18. The Tory Lover—Jewett.
19. The Ruling Passion—Van Dyke.
20. Warwick of the Knobs—Lloyd.
21. Tarry Thou Till I Come—Croly.
22. The Helmet of Navarre—Runkle.
23. Life Everlasting—Fiske.
24. The Secret Orchard—Castle.
25. Fóma Gordyeef—Górki.
26. The History of Sir Richard Calmady—Malet.
27. A Friend with the Countersign—Benson.
28. Raffles—Hornung.
29. In Search of Mademoiselle—Gibbs.
30. The Octopus—Norris.

LIBRARIANS' REPORTS.

1. The Crisis—Churchill.
2. D'ri and I—Bacheller.
3. The Eternal City—Caine.
4. The Right of Way—Parker.
5. Truth Dexter—McCall.
6. The Puppet Crown—McGrath.
7. The Helmet of Navarre—Runkle.
8. A Sailor's Log—Evans.
9. The Tribulations of a Princess—Anon.
10. Blennerhasset—Pidgin.
11. The Life of Phillips Brooks—Allen.
12. Tarry Thou Till I Come—Croly.
13. Graustark—McCutcheon.
14. Up from Slavery—Washington.
15. Alice of Old Vincennes—Thompson.
16. Cardigan—Chambers.
17. The Visits of Elizabeth—Glyn.
18. The Gentleman from Indiana—Tarkington.
19. When Knighthood Was in Flower—Major.
20. Kim—Kipling.
21. The Cavalier—Cable.
22. China and the Allies—Landor.
23. Eben Holden—Bacheller.
24. The Individual—Shaler.
25. Penelope's Irish Experiences—Wiggin.
26. Fóma Gordyeef—Górky.
27. Eleanor—Ward.
28. Like Another Helen—Horton.
29. The Octopus—Norris.
30. The Riddle of the Universe—Haeckel.

The order of demand for the six best-selling novels between October 1 and November 1, according to *The Bookman* (December), is as follows:

The Right of Way—Parker.
The Crisis—Churchill.
The Eternal City—Caine.
D'ri and I—Bacheller.
Kim—Kipling.
Lazarre—Catherwood.

SCIENCE AND INVENTION.

THE SUN'S HEAT; WHENCE AND HOW GREAT?

HOW much heat does the earth receive from the sun? How large a fraction is this of the total amount given off? What is the sun's temperature? How does it keep up its heat-supply? These are questions that have occupied students of physical astronomy for many years, and it can not be said that they are yet answered to the satisfaction of everybody. The latest state of scientific belief on the subject is set forth by Dr. Albert Battandier in *Cosmos* (Paris, November 16). Says Dr. Battandier:

"One day, George Stephenson, seeing a train drawn by one of his locomotives, asked of a friend: 'What makes that train go?' 'The engine,' was the reply. 'But what moves the engine?' 'The steam.' ''And what makes the steam?' 'The coal.' 'But what has produced the coal?' His friend remained silent for a moment after this unforeseen question, and Stephenson replied to it in a word—'The sun.'

"And, in fact, the whole earth is the gift of the sun. . . . Now we can ask regarding the sun a fourfold question. What is the quantity of heat that it sends to the earth; what is the quantity that it sends out into space; what is its temperature, that enables it to produce such enormous effects; and, finally, how is its heat kept up and preserved?

"It is not difficult to measure the quantity of heat that the sun pours on the earth. Herschel found, at the Cape of Good Hope, that in one minute a vertical sun could melt a layer of ice 0.1915 millimeter [about $\frac{1}{125}$ inch] thick. Pouillet, trying the same experiment at Paris, obtained the figures 0.1786. There is a difference between the two, but it is easy to explain it by the difference of permeability of the atmosphere and by local conditions. If we take the average, or 0.1850, we reach the result that in one hour the sun's heat is capable of melting a layer of ice 1.11 centimeters [about ½ inch] thick.

"But this value is much below the truth. We measure thus only the effect produced by the sun's heat on the surface of the ground; now to reach us the rays must traverse the atmosphere, which abstracts a great part of the heat. This is shown by experiments made at various heights. . . . If, then, we could do away with the atmosphere, the earth would receive on its surface almost twice as much heat as it does now. If we could distribute this uniformly, the amount received in one year would be sufficient to liquefy a shell of ice 30 meters [nearly 100 feet] thick around the entire globe."

But the earth is not alone in space, and it receives but a very tiny part of the heat given out by the sun—about $\frac{1}{2,138,000,000}$. To have, therefore, the total heat dispensed by the sun, we should multiply the amount already obtained by the denominator of this fraction. This heat would be equal in one second to that produced by the combustion of 11,600,000 billions of tons of coal, and would be sufficient to raise in one hour from the temperature of melting ice to the boiling-point eight times the volume of water contained in all the seas of the globe. To quote again:

"When we have shown the almost immeasurable effects of the sun's heat-radiation, it would seem that to argue from effect to source would be only child's play, and yet this is the point where differences of opinion begin. What is the sun's temperature? This simple and precise question throws the scientists into the greatest embarrassment, and they give the most diverse answers to it. Witness the following examples, where the numbers are arranged in increasing order:

Vicaire.....1,396°	Zolner.....102,000°
Violle.....1,500°	Newton.....1,669,300°
Pouillet.....1,461° to 1,771°	Ericsson.....2,726,700°
Fozeau.....7,500°	Secchi.....2,000,000° to 6,000,000°
Ste-Claire Deville.....2,500° to 2,800°	Soret.....5,801,546°
Rosetti.....20,000°	Waterston.....9,000,000° to 10,000,000°
Spover.....27,000°	

"We see that the disagreement could scarcely be more complete, and we may well ask how scientific methods can possibly lead to such different results. The excellent review of Mgr. Pietro Maffi, in *Rivista di Fisica*, presents a study of the most recent investigations along this line. If you take an actinometer, it says, and expose it to the sun, its temperature will gradually rise until it becomes stationary. Then the bulb of the thermometer will be losing by radiation just what it is gaining by direct irradiation from the sun. It is from this fact as a starting-point that different investigators have sought to evaluate the sun's temperature. They have made use of the law discovered by Newton that loss of heat by radiation is proportional to the difference of temperature. . . . Now Newton's law is exact for temperatures from 0° to 100° but not above. Dulong and Petit, having taken up the investigation, made calculations for temperatures up to 300°, and the results, confirmed by experiment, gave for the temperature of 240° a value double that found by Newton. Given this double basis it is clear that the conclusions will be different as the authors take the law of Newton or the experiments of Dulong and Petit."

Dr. Battandier concludes that the figures of Rosetti, 20,000°, are the most reasonable. The lower ones are inadmissible because the spectroscope shows us that the sun contains the vapors of substances that vaporize only at higher temperatures than these. The higher ones—those that run up into the millions—seem unnecessarily large, as it is certain that all the phenomena that we have seen in the sun may take place at a few thousands of degrees.

This is a fearful heat; how does the sun, which is cooling off all the time, keep it up? Combustion is out of the question, for, as we have seen, that would sustain it only for a very brief time.

The fall of meteors into the sun could, and probably does, help to maintain it. But the author accepts Helmholtz's view that the slow condensation of the sun is sufficient to keep up its temperature. Of course this must one day come to an end and the sun will ultimately cool off; but the time that must elapse before this passes human imagination. Ere it takes place, the sun may collide with some other great celestial body, and it and its planets, instead of perishing with cold, may "melt with fervent heat" as the Scriptures tell us they will do.—*Translation made for* THE LITERARY DIGEST.

PRACTISE IN AN AIR-SHIP.

OF the two types of air-ship, the dirigible balloon and the aeroplane, the latter has been the favorite of scientific men, but purely from theoretical considerations. The success of such inventors as Santos-Dumont has given the dirigible balloon a boom, as showing what can actually be accomplished with it. Santos-Dumont has "flown" around the Eiffel Tower, whereas no aeroplane with a man on board has ever flown a foot. In the *Revue Scientifique*, M. Messier points out that this must necessarily be the case as long as systematic trials of progressive degrees of difficulty are not made of these machines. He says:

"The complete failure of the attempts of Lilienthal, Maxim, Roze, and all others who have attempted to solve the problem of aerial navigation with devices heavier than the air, shows how rash it is to seek the solution of such a difficult question. Is it not evident that even when an eminent inventor succeeds in constructing an air-ship powerful enough to raise itself into the air with its motor, he will not know how to maneuver so heavy a machine; and so will not be able to avoid a catastrophe, since he will have no opportunity for preliminary practise? Ordinary common sense will enable us to affirm that if this problem is some day solved, it will not be until after progressive trials with the aid of small captive machines. Thus there should be built successively: 1. Very light flying-machines having to carry only an electric motor, the generating dynamo resting on the ground, so that the machinist can control the device from a distance like a dirigible torpedo; 2. more powerful machines capable of carrying not only the motor but the aëronaut, the generator still remaining on the earth. As this second type of machine is perfected, they can be made more and more powerful and capable