

SCIENCE:

A WEEKLY NEWSPAPER OF ALL THE ARTS AND SCIENCES.

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Attention is called to the "Wants" column. All are invited to use it in soliciting information or seeking new positions. The name and address of applicants should be given in full, so that answers will go direct to them. The "Exchange" column is likewise open.

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THE RELATIONS OF MEN OF SCIENCE TO THE
GENERAL PUBLIC.

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Referring to the theoretically extremely interesting spar prism of Bertrand, which under certain conditions may be used to detect traces of polarization of light, a recent writer remarks, "But for this application, the prism would possess, in the eyes of the true votary of science, the inestimable value of being of no practical utility whatever."

Much is said, everywhere and at all times, about the pursuit of science for the sake of science; and on every hand it is sought to convey the impression that one who has any other object in view in interrogating Nature than the mere pleasure of listening to her replies, is unworthy of a high place among men of science. So old, so universally accepted, so orthodox, is this proposition, that it is with much hesitation that its truth is questioned in this presence. In so far as it means that one cannot do any thing well unless it is done *con amore*; that pecuniary reward alone will never develop genius; that no great philosopher, or poet, or artist, will ever be other than unselfishly devoted to and in love with his work,—just so far it is true, although it does not, as is often assumed, furnish a motive of the highest or-

der. It is a trite saying, but perhaps it cannot be too often repeated, that he who lives and labors in the interest of his fellows, that their lives may be brightened, that their burdens may be lessened, is, above all others, worthy of the highest praise. By this standard the value of a discovery must at last be fixed; bearing in mind, of course, that the physical comfort of man is not alone to be considered. Judged by this standard, the work of Newton, of Watt, of Franklin, Rumford, Faraday, Henry, and a host of others, is truly great. There should be, and there usually is, no controversy as to relative merit between the discoverer of a gem and the artist who polishes and sets it. In science the genius of the former is unquestionably rarer and of a higher order; but his work will always be incomplete, and in a great degree useless, until supplemented by that of the latter.

Another demand which the public may justly make upon the man of science is that his interest in public affairs should not be less than that of other men. Through his failure in this particular, science has long suffered, and is suffering in an increasing degree. This criticism is especially applicable in this country, where in theory every man is supposed to bear his share of the public burden, and to take his part in the performance of public duties. Unfortunately, the attitude of the scientific man is too often one of criticism and complaint concerning matters in the disposition of which he persistently declines to interfere. It cannot be denied, I think, that men well trained in the logic and methods of scientific research ought to be exceptionally well equipped for the performance of certain public duties constantly arising out of local, state, or national legislation; yet the impression is well-nigh universal that the scientific man has no genius for "affairs." Indeed, it has been more than once affirmed that he is utterly devoid of administrative or executive ability, and even that he cannot be trusted with the direction of operations which are almost wholly scientific in their nature. That there are many examples which seem to justify this belief is too true, but that there are other instances in which administrative and scientific ability have been combined is also true. Little search is required to reveal cases in which men of science have so ignored all ordinary rules and maxims of business procedure as to merit severe criticism, in which, unfortunately, the public does not discriminate between the individual and the class which he represents. It seems astonishing that one who is capable of successfully planning and executing an elaborate research, in which all contingencies are provided for, the unexpected anticipated, and all weak points guarded and protected, may utterly break down in the management of some much less complicated business affair, such as the erection of a laboratory or the planning of an expedition; and I am unwilling to believe that such failures are due to any thing other than culpable negligence on the part of the individual.

It is generally recognized, that, aside from all questions of a partisan political nature, this country is to-day confronted by several problems of the utmost importance to its welfare, to the proper solution of which the highest intellectual powers of the nation should be given. The computation of the trajectory of a planet is a far easier task than forecasting the true policy of a great republic, but those