liquid, or concrete form," which inference leads to a conclusion that seems to contain the gist of the theory advanced, and is expressed as follows. "Therefore it is reasonable to assume that this ether is composed of atoms in their normal and most rarefied state, distinct and varied in species as to their nature and substance, are unchangeable and undestructible, involved by forces of affinity from ether to a density (*sic*), and finally into a gaseous, liquid, or concrete form. And as all matter known to us is capable of being rendered volatile, either by the action of heat or potent dissolving alkalies, they are dissolved again in the course of eternity from concrete to ether." The author applies this principle of "Ether thou art, and to ether shalt thou return," very comprehensively, taking in such diverse subjects as "Nebulæ resulting in Solar Formations," "The Phenomena of the Magnet and Aurora Borealis," "The Survival of the Fittest in Protoplasmic Organisms," "Mind of Mankind," and "Rise and Fall of Nations." He also discourses freely upon "free calorics" and "latent calorics," which apparently play an important part in the scheme of involution and devolution set forth.

LETTERS TO THE EDITOR.

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of* NATURE. *No notice is taken of anonymous communications.*]

The Position of Science at Oxford.

MAY I be allowed, as one who has had some experience both within the University itself, in more than one capacity, and also in one of our public schools, to offer a few remarks on this subject?

Your recent article states that the failure of the Science School at Oxford is not complete because "it has long been recognised that the attainments of the limited number of scientific men which it turns out compare well with those of men who have been educated in other places"; while in a subsequent passage we read: "The Science School at Cambridge has acquired such a prestige that the best boys go there, and only the second best to Oxford." These two statements are either mutually opposed, or the teaching at Oxford is of so high an order that while there the "second best" are made capable of favourable comparison with those "best boys" educated elsewhere. "Failure" is hardly an apt description of such an achievement. In my opinion Oxford gets its full share of "best boys." I can quote instances of boys of second-rate ability who have gained scholarships at Cambridge, but would have failed to do so at any college at Oxford. The standard required by Oxford is undoubtedly a higher one than that which is sufficient at many (not all) Cambridge colleges; and, as a rule, the value of Oxford scholarships is correspondingly greater In my experience the character of the Final Honour Schools of Science at Oxford is such that a boy of brilliant attainments and originality is more benefited by the course there prescribed, than by the wider but shallower training of Part I. of the Science Tripos. It is my practice to endeavour to send such boys to Oxford, and hitherto there has been no cause for repentance. The prestige of the Cambridge Medical School is undoubtedly a great obstacle to the increase in numbers (if indeed this is to be desired) of science students at Oxford. London and Cambridge practitioners far outnumber all others, and it is to one of these that the parents of boys who give evidence of scientific tastes, turn for advice regarding their sons. Can it be wondered that the advice given is generally in favour of some school other than at Oxford? Until the general public realises that, alike in pure science and in medicine and surgery, Oxford can and does hold her own with other places of education, the number of Oxford students will remain small.

I believe, however, that many staunch friends of Oxford hold with me, that a small school of high standard is more in accordance with her best interests, than a large one in which applied science stifles the acquirement of knowledge for its own sake.

You pronounce, on the whole, against Greek as a compulsory subject. Does any scientific man who has learnt, be it never so little, Greek, regret the time spent upon it? In teaching elementary science, especially biology, it is brought home to the teacher that technical terms form a serious stumbling-block to many boys; but if the classical derivation of these words is mentioned, they at once cease to be difficulties, and become readily familiar. The Greek language is called into service in so many of these modern terms, that ignorance of Greek cannot fail to materially increase the obstacles that beset the path of the beginner. This is perhaps a low ground on which to argue in favour of Greek, but it is one that is too frequently entirely overlooked by its opponents.

"On the whole, the teaching in public schools is bad." One of the accused can hardly reply impartially to such a charge, but I fully agree with the half-acquittal implied in the subsequent query: "Are the public schools altogether to blame?" Science labours under heavy disadvantages at most public schools. The *genius* of the schools is classical. The value attached to science is so small, that even a promising boy cannot make up by his science for deficiency in classics or mathematics, and thus is condemned to pass his days in the lower part of the school; whereas the acute classic, however obtuse in science, is in no way hindered on his path to the sixth form. Promotion is on the aggregate of marks, and the proportion allotted to science is insignificant. Classes are arranged by aggregate merit, and a graduated series of science classes grouped according to scientific ability is almost unknown. A scientific subject added to responsions would probably improve matters; but it must be remembered that some minds are so constituted (I speak from experience and mature conviction), that scientific subjects are to them of no educational value whatever, and a compulsory examination in science would prove an impediment to many a brilliant classic whose progress we should do ill to bar. If, however, such an examination were to act in a downward direction, and cause public schools to include science in their entrance and scholarship examinations, it would indeed serve a good purpose. Few preparatory schools include science in their curriculum; their whole energy is devoted to those subjects which will bring a substantial return of advertising value in the form of a scholarship. Experience has shown me in an unmistakable way that boys who have gone through the entrance scholarship mill have, in most cases, had all aptitude for science crushed out of them, and that they require a course of mentally-invalid treatment before any of them recover a healthy tone and attitude of mind towards a subject of which they have been hitherto kept in ignorance These boys are presumably the pick of their contemporaries in general ability, and at present these keener intellects are debarred from exercise in scientific subjects, for which assuredly some few would exhibit a preference.

In a guarded expression you give your vote to the study of physics and chemistry in schools. This view is one very generally held; but I believe it to be wrong, and an inversion of the natural order. Our object, I take it, is to draw out and develop in our pupils those talents that they severally possess. Boys are outdoor beings, and they should be so; nearly every boy at some period of his life collects insects, bird's eggs, or flowers. It is this collecting instinct which ought to be converted by education into the observing habit, and so made a natural foundation on which to erect a truly scientific superstructure of acquired knowledge. More boys are interested and intellectually stimulated by subjects touching on natural history than by physics and chemistry. These last not infrequently repel at first, whereas the others can to a certain extent be pursued on the play-fields and in the surrounding country. The pupil soon finds that he must acquire some knowledge of physics and chemistry; and the want being felt, the task is more willingly undertaken. In this connection I must state my belief that the present style of examination for science scholarships at both Universities does not give sufficient opportunity to the "boy naturalist," and indeed the majority of boys who become scholars are not "naturalists" in any sense. Many colleges have in this respect materially improved their examinations recently, and the change is beginning to bear fruit; but until it is more widely recognised that the boy naturalist is the parent of the man scientific, so long will many minds, by nature best suited to extend our knowledge, be diverted into unnatural and less fertile channels.

OSWALD H. LATTER.

Charterhouse, Godalming, July 13.