pharmacopœias.) The filtered liquor gave a precipitate of sulphuret of mercury with sulphuretted hydrogen, the weight of which was not ascertained.

Sixty-four grains of No. 2, (obtained from England last November) treated in the same manner as No. 1, gave 3.2 grs. of calomel, the quantity of sub-oxide estimated from which is 2.8 grs. The fluid filtered after precipitation and separation of calomel gave with sulphuretted hydrogen gas 0.75 gr. of sulphuret, indicating 0.697 gr. of protoxide (peroxide of the pharmacopœias.)

Sixty-four grains of No. 3, (3 or 4 years old) treated as Nos. 1 and 2, gave 5 grs. of calomel, calculating the sub-oxide, from this we have 4.4 grs. The filtered liquor gave a precipitate with sulphuretted hydrogen weighing 1.25 grs., the protoxide estimated from this quantity of sulphuret is 1.163 grs.

The presence of protoxide in mercury with chalk, is no doubt owing to the partial decomposition of the sub-oxide, which is partly resolved by keeping into protoxide and metallic mercury, as occurs with all this oxide met with in druggists' shops. If the protoxide be derived from this source, we may consider the .697 gr. of protoxide in No. 2, as indicating an original quantity of 1.367 grs. of sub-oxide, making the whole quantity of sub-oxide contained in 64 grs. of No. 2, 4.177 grs. In like manner we may estimate an original quantity of 2.27 grs. of sub-oxide as existing in No. 3, from the 1.163 grs. of protoxide, which added to the 4.4 grs. of sub-oxide calculated from the weight of calomel obtained, gives 6.67 grs. as the whole quantity of sub-oxide originally contained in 64 grs. of this sample.

The society will perceive from the results of these experiments, that the mercury with chalk, usually considered the mildest of all the mercurial preparations, contained a large proportion of oxides of mercury, while the blue pill did not show any traces of the presence of an oxide of this metal. We cannot, I apprehend, arrive at any other conclusion on the subject, than that the efficacy of these preparations does not depend upon the existence of an oxide of mercury in them, otherwise the blue pill would be inert and the mercury with chalk a certain and active mercurial, the reverse of which we know to be the case. It would also appear that in making these preparations, the presence of viscid saccharine substances far from facilitating the oxidation of mercury, as is I believe the general opinion, tends to prevent it although they no doubt favour its extinction; consequently the Dublin College is wrong in ordering the addition of manna in making mercury with chalk, if they suppose its activity to depend upon the quantity of oxide formed, but correct if it be ordered merely with the view of favouring the extinction of the metal.

It is not my intention to review all that has been written on this subject, nor to refer to all the experiments performed at different times and by various parties in order to bring this long-debated question to a satisfactory termination, as it would afford matter sufficient for several papers, but I will briefly notice the opinions of two recent writers, Dr. Christison and Dr. Thomson. The former, after stating that he has always found about 1-50th of the mercury of the ointment in the state of oxide, writes, "It is far from improbable that the small proportion of oxide, either present at first or formed during the process of rubbing the ointment into the skin, is the only active part of the mercury." If such be the case, why is not the ointment of grey oxide as effectual as the mercurial ointment? Again, Dr. Christison writes: "In regard to the pillula hydrargyri as well as the hydrargyrum cum cretâ, and hydrargyrum cum magnesia, the inquiries hitherto made rather tend to show that they do not contain any oxide. But the reverse may be presumed both from the mode of preparing them being somewhat similar to what is practised in making the ointment; and likewise from their activity as mercurials, compared with the inertness of mercury when unequivocally in the metallic state only." If, as Dr. Christison seems to consider, the oxide be the active constituent of the ointment, it must be a very energetic substance, since this ointment, administered internally, is, perhaps, the most powerful means we possess of producing mercurialism. According to some French physicians, 2 grs. of the ointment given every 2 or 3 hours, speedily produce salivation, frequently in the space of 24 hours. It is difficult for any but a homœopathist to believe that such certain and rapid effects can result from doses containing only the fiftieth of a grain of oxide, supposing the rest of the mercury inert. How does it happen that the black oxide of the pharmacopœias, is not equally energetic in its action? and how is it that the mercury with chalk is less active than the blue pill?

On the subject of the actions and uses of mercury, Dr. Christison says: "It is a general law in physiology —to which it would be strange were mercury the sole exception,—that metals do not act as such, but must be first converted into oxides or salts." I confess it would not appear strange to me if mercury were, as I incline to believe it is, an exception, since this metal differs widely from all others in many particulars; no other known metal is fluid at ordinary temperatures, and surrounded with its own vapour; nor is there, I imagine, any other which is capable of being so minutely divided;—witness for instance, the extreme fineness and minuteness of division of which it is susceptible, when a solution of