

atmosphere. This purity might be obtained by boiling, but this would be rather disagreeable to the surgeons and assistants, so to obviate this, chemical means called antiseptics, are employed for the destruction or prevention of the invasion of bacteria. Let me say here, that under the antiseptic treatment, the suppurating, sloughing wounds are now seldom seen and the nasty odour of surgical wards no longer exists. Indeed the air in the wards of this Hospital is perhaps even purer than that outside, thier visible cleanliness wonderful, and most praiseworthy. Many cases of amputation and other surgical operations may to-day be seen in the wards, which have absolutely healed by "first intention," without suppurating at all, and in a very few days. By this new treatment, thousands of lives are almost daily saved; in fact it has come to this, that with antiseptic precautions operations are now performed with impunity and success, which under more ancient procedure would in many instances have proved fatal, or not been done at all. This scientific treatment of course necessitates educated assistants as well during as after the operation, and in greater number too, for it is no small trouble, yet an absolutely necessary one, to prepare the patients, instruments and every person and thing else for every serious operation; and to maintain these conditions in the after treatment. The successes of surgery, and indeed of medicine too, through the aid of anaesthetics and antiseptics, are the wonders of the age. No one foresees what will happen during the ensuing half century. Doubtless the discovery of the infinite variety of bacteria and the knowledge of their *cause* and effects will in time cause more changes in the treatment and prevention of disease; but the inquiry arises, how did these bacteria originate? Are they capable of variation by crossing and so forth, and so be productive of new varieties and new diseases, or have the diseases existed from time immemorial? Is the origin of bacteria comparatively modern, or more ancient than man? These micro-organisms, open up a tremendous and enticing field for scientists and others. If the laboratory of nature could be imitated, conditions might possibly be found under which so-called inorganic atoms might be seen to become endowed with vitality, transmutations and new creations discovered. A veil may be lifted now and again, but there is