

which their forms and habits are being studied through magnifying media, where-with the inventive mind of man has supplemented the natural limits of his vision. And soon, by the aid of photography, we may be able to dip, nay, have already dipped, more deeply into this obscure region than the human eye can penetrate.

Taken in through the inspired air or by means of contaminated food, these infusoria are distributed throughout the body, and find lodgment at points of least resistance, where they become foci of irritation and provoke a modified inflammatory process, which results in the development of tubercle. But the mere introduction of these bacteria into the system will not invariably cause tuberculosis, since the healthy tissue as a rule repels any attempt of the germs to establish themselves, and, were this not so, humanity ere now would have been exterminated.

The bacilli, or their putrefactive products termed ptomaines, enter the circulation, and by their effect upon the heat centres cause an elevation of temperature, which is an outward expression of the inward conflict that is being carried on to expel the poisonous principle, and as all nature is rythmical in its action, the fever partakes of this inherent character. Hence the cessation of the pyrexia is a sign of the inactivity of the fermentation, and if the organic structures have not suffered too great havoc in the struggle, recovery from the affection may take place; but if the tissues are extensively destroyed, death may ensue from the inability of the patient to survive the disorganization. Thus the famous saying of Niemeyer, that the greatest danger for the majority of consumptives is that they are apt to become tuberculous, must undergo revision in the light of recent developments; for the greatest danger now threatening mankind is that cells of a retrograde metamorphosis may chance to encounter the tubercle bacillus in its wanderings.

Bacteria abound in enclosures and in

densely populated towns, whereas they are not found, especially at great elevations, in the open country. Likewise phthisis prevails to a much greater extent in the cities than in rural districts and among the sedentary than amid those otherwise circumstanced, and, practically, the disease seldom exists at high altitudes. Domesticated animals that are crowded together and wild beasts confined in cages often die of tuberculosis. So, also, soldiers packed too closely in barracks, and inmates of prisons with insufficient breathing space have an excessive mortality from consumption.

While we believe that the germs of tubercle are not often directly transmitted to offspring, nevertheless, degraded cells enter into the new organisms, which form an inviting nidus for the ubiquitous bacillus. If it is true that each of the millions of cells that constitute the individual has a representative in the protoplasmic matter which combines for the evolution of the succeeding generation, then it is not strange that the cells which go to make up the lungs in another development should be relatively deficient in vitality. There is no difficulty in comprehending inheritance among some of the lowest forms of life, for the homogeneous body of the parent simply divides in two or more parts, a process called fission, and ceases its personal existence, while the descendants continue their separate lives, similar in every respect to the proximate ancestor. But, when we rise to the more highly evolved and differentiated animal texture, where each cell has its special function, and all cells a mutual dependence, such self-division would be fatal alike to parent and child. Hence the hypothesis of an assemblage of physiological units representing the entire fabric of the body in the sperm-cell and germ-cell of the progenitors, whose integrity in this process is practically maintained. This comprises all there is of the so-called inheritance of phthisis. On the other hand, an acquired insecurity from the pathogenic germ is due to innumerable