

maining the criminal. We will take off the knowledge centres next and we have the imbecile. Take off locomotion, the next, and we have the lowest form of idiot. Take off the next and breathing ceases, though the pulsation of the heart may continue for some time. Take away the next and we have death.

If we could paralyze these brain centres temporarily by any means we would have exactly the same phenomena, and we would be paralyzing the brain centres in the inverse order of their development. Any force or drug that would do this would probably have the most potent effect on the highest group of centres, for this is the last developed in the evolution of the individual as well as of the race, and consequently offers less resistance to a malign influence. It would probably, therefore, require a larger dose of the drug or a greater force of the potent influence to affect the next, and so on right down this series. The heart centres being basal, primal, longer-lived, that is with the longest phylogenetic history, would suffer last and suffer least throughout the experiment.

Drugs and Their Affinities

Most drugs have what is called an "affinity" for certain tissues of the body. Many poisonous drugs entirely ignore certain parts and tissues of the body, but have a violent affection for certain other tissues. Belladonna, for instance, is a vegetable poison which has an affinity for the centres of the brain that preside over the secretory glands. It has also a special paralyzing effect upon the nerve centre which presides over the pupil of the eye. The heart motor-centres are especially affected by nicotine, the spinal by strychnine, and so on.

Specific Affinities of Alcohol

If alcohol has a specific affinity for the brain centres, paralyzing those centres in the inverse order of their development, the last developed suffering first and most, and the first developed suffering last and least, we should be able to discover this law by the naked-eye observation of one of the most unfortunate, degrading and frequent phenomena of daily life—a drunken man.

Let us watch the process of intoxication in a youth unused to alcoholic indulgence. He is strong, healthy, robust, athletic, full of fire and the energy of youth—cultured, mentally equipped, self-disciplined, majestically serene. He has by tuition and experience, and the cultivation which these two teachers provide, acquired that complete mastery over all his activities and desires which is the goal of character-building and the purpose of his God. Every impulse, however trifling or however great, is bridled, hitted and reined by a guiding principle in his will, or, to state the fact in cellular physiology, the upper of his brain centres is fully developed.

Now let us treat him to a dose of our mephitic mixture. It gets into his circulation. That circulation carries it unaltered to his brain and bathes all his nerve centres in its flow.

The higher centres, being less stable and most susceptible to its malign influence, suffer first, the lower suffer least, perhaps not at all, with this first moderate dose. But these higher centres stagger, lose their grip, let go the reins. The young man loses his reserve, a little of his self-control, perhaps his silence. He "unhends," we say, and becomes garrulous. He tells the secrets of his bank or office. He confides some personal affairs, in short, he loses his former self-restraint. He is tempted to say and do things that he would never have said or done in his normal moments. He is asked to sing and complies with abnormal readiness, but study his vocal notes—the most difficult to perform are the ones at which he fails first. The last piece or note that he learned is the first at which he fails and fails most signally. The most difficult word to pronounce is the first he slurs. The simple ones he learned in boyhood and has repeated most often—in physiological terms, the words having the deepest track in his brain centres because of the frequency of their journeys in those routes during his past life—are the words he most easily and clearly enunciates. He is able to walk and stand, and think and act, along the lines of frequent past experience, that is, along the nerve centres which he has most frequently used and which constitute the moral basal foundation of his ac-