

that renders the solitary use of a nutritive substance (as starch, gum, or sugar) less favourable to assimilation, and to the reparation of the losses which the human body undergoes. Opium, which is not nutritive, is employed with success in Asia, in times of great scarcity; it acts as a tonic. But when the matter which fills the stomach can be regarded neither as an aliment, that is, as proper to be assimilated, nor as a tonic stimulating the nerves, the cessation of hunger is probably owing only to the secretion of the gastric juice. We here touch upon a problem of physiology which has not been sufficiently investigated. Hunger is appeased, the painful feeling of inanition ceases, when the stomach is filled. It is said that this viscus stands in need of *ballast*; and every language furnishes figurative expressions, which convey the idea that a mechanical distension of the stomach causes an agreeable sensation. Recent works of physiology still speak of the painful contraction which the stomach experiences during hunger, the friction of its sides against one another, and the action of the gastric juice on the texture of the digestive apparatus. The observations of Bichat, and more particularly the fine experiments of Majendie, are in contradiction to these superannuated hypotheses. After twenty-four, forty-eight, or even sixty hours of abstinence, no contraction of the stomach is observed; it is only on the fourth or fifth day that this organ appears to change in a small degree its dimensions. The quantity of the gastric juice diminishes with the duration of abstinence. It is probable that this juice, far from accumulating, is digested as an alimentary substance. If a cat or dog be made to swallow a substance which is not susceptible of being digested, a pebble for instance, a mucous and acid liquid is formed abundantly in the cavity of the stomach, somewhat resembling in its composition the gastric juice of the human body. It appears to me very probable, that when the want of aliments compels the Ottomacs and the inhabitants of New Caledonia to swallow clay and steatite during a part of the year, these earths occasion a powerful secretion of the gastric and pancreatic juices in the digestive apparatus of these people. The observations which I made on the banks of the Orinoco, have been recently confirmed