return to bed, and when they are awake they have no recollection of any of these occurrences. Sometimes the actions performed are of a complicated character and bear some relation to the daily life of the sleeper. Thus a cook has been known to rise out of bed, carry a pitcher to a well in the garden, fill it, go back to the house, fill various vessels carefully and without spilling a drop of water, then return to bed, and have no recollection of what had transpired. Again, somnambulists have been observed to write letters or reports, execute drawings, and play upon musical instruments. Frequently they have gone along dangerous paths, executing delicate move­ments with precision. Four types of somnambulist may be noticed,—(1) those who speak without acting, a common variety often observed in children and not usually considered somnam­bulistic ; (2) those who act without speaking, also well known and the most common type ; (3) those who both act and speak, more exceptional ; and (4) those who both act and speak and who have not merely the sense of touch active but also the senses of sight and hearing. The fourth class is the most extreme type and merges into the physiological condition of mesmerism or hypnotism. This peculiar condition has already been fully described under animal magnetism (see Magnetism, Animal), and it is necessary here only to notice it in connexion with the subject of sleep. Many observa­tions indicate that, at all events in some cases, the somnambulist, engaged, for example, in writing, has a mental picture of the page before him and of the words he has written. He does not see what he really writes. This has been proved by causing persons to write on a sheet of paper lying on the top of other sheets. After he has been allowed to write a few sentences, the sheet was carefully with­drawn and he continued his writing on the next sheet, beginning on the new sheet at the corresponding point where he left off on the first one. Moreover, the somnambulist, by force of habit, stroked t’s and dotted i’s at the exact places where the t’s and i’s would have been had he written continuously on one sheet, showing that what he was conscious of was not what was before him but the mental picture of what he had done.

The following table, modified from two such tables given by Ball and Chambard in their exhaustive article “ Somnambulisme ” in the *Dictionnaire Encylopédique des Sciences Médicales,* shows the relation of the various intermediate conditions of sleeping and awaking and of the dreaming and somnambulistic states. The horizontal stroke indicates the presence of the condition the name of which heads the column :—

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Organic  Life. | Conscious­  ness. | Imagin­  ative  Faculties. | Co-ordi­  nating  Faculties. | Power of Movement and Sen­sibility. |
| Normal waking state .. Sleep, 1st degree | — | — | — | — | — |
| ,, 2d degree | — | — | — |  |  |
| ,, 3d degree | — | — |  |  |  |
| Deep sleep | — |  |  |  |  |
| Waking, 1st degree .... ,, 2d degree (speci­ally dreaming state) | —  — | —  — | — |  |  |
| ,, 3d degree  Complete waking  Dreaming state | —  —  — | —  —  — | —  —  — | —  — | — |
| Ordinary somnambulism —(2) above | — |  | — | — | — |
| Profound somnambulism (perfect unconscious­ness) | — |  |  |  | — |
| Somnambulistic dream (movements in a dream) | — |  | — |  | — |

The somnambulist acts his dream. His condition is that of a vivid dream in which the cerebrum is so active as to influence centres usually concerned in voluntary movements. Under the dominant idea he executes the movements that this idea would naturally excite in the waking state. Many of his movements are in a sense purposive ; his eyes may be shut so that the movements are executed in the dark, or the eyes may be open so that there is a picture on the retina that may awaken no consciousness, and yet may, by reflex mechanisms, be the starting-point of definite and deliberate movements. In many cases he does not hear, the audi­tory centres not responding ; but in others suggestive words may alter the current of his dream and lead him to perform other actions than what he intended to do. On awaking there is either no memory of what has taken place or the dim recollection of a fading dream.

It is important to notice that there is scarcely any action of which a somnambulist may not be capable, and immoral acts from which the individual would shrink in waking hours may be per­formed with indifference. Considering the abrogation of self-con­trol peculiar to the physiological condition, it is evident that no moral responsibility can be attached to such actions. In cases where somnambulistic propensities place a person in danger, an endeavour should be made to induce him to return to bed with­out awaking him ; as a rude awakening may produce a serious

shock to the nervous system. Inquiry should then be made into the exciting cause of the somnambulistic dream, such as a particular train of thought, over-excitement, the reading of special books, the recollection of an accident or of a crisis in the person’s history, with the view of removing the cause if possible. It should never be forgotten that somnambulism, like chorea, hysteria, and epilepsy, is the expression of a general morbid predisposition, an indication of a nervous diathesis, requiring careful treatment so as to avoid more dangerous maladies.

See article "Sommeil "in the *Dictionnaire Encyclopédique des Sciences Médicales,* where a full bibliography is given and where also there is an account of the medico-legal questions connected with sleep and somnambulism ; Macnish, *Physiology of Sleep* ; Durham, “ On the Physiology of Sleep,” in Gay’s *Hospital Reports,* 1860; Kohlschütter, “Die Mekanik des Schlafes,” in *Z. f. ration. Med.,* vol. xxxiii., 1869 ; Pflüger, “ Theorie des Schlafes,” in *Pflüger's Archiv,* vol. x., 1875 ; Mosso, *Heber den Kreislauf des Blutes im menschlichen Gehirn,* Leipsic, 1881. As to somnambulism, see the article on the subject in the *Dictionnaire* both for füll details and a copious bibliography. (J. G. M.)

SLEIDANUS, John (c. 1506-1556), the annalist of the Reformation, was born at Schleiden (now a small village in the Oleffthal, about 42 miles south-west of Cologne) in 1506 or 1508. Passing from the village school, he studied at Liége, Cologne (?), Louvain (where he became tutor to the son of Count Manderscheid of Schleiden), Paris, and Orleans (where he studied law). In 1536 he became secretary to Cardinal du Bellay, minister of Francis I., and spent five years with him and with his brother Cardinal Guillaume du Bellay. The cardinals Du Bellay belonged to that party among the French nobility who desired on political grounds an alliance between the German Protestants and Francis against the emperor Charles V., and who employed the leaders of the Strasburg citizens as inter­mediaries. Sleidanus, whilst among the humanists of Liège, had adopted Protestant opinions, had learned to dis­trust the Romanist policy of Charles V., and was himself a strong supporter on religious and political grounds of the plans of the brothers Du Bellay. Their confidence in him was such that he was sent (1540) to watch the conduct of the French ambassador at Hagenau, and this brought him into personal relation with the German Protestant leaders. Next year Du Bellay sent him to confer with the heads of the Schmalkaldic League, when he found his patron’s ideas unacceptable. Philip of Hesse and the elector of Saxony would make no alliance with a foreign power against the emperor, and distrusted Francis personally because of his persecution of French Protestants. It is possible that this news made Du Bellay feel that he had no further need for his secretary, for we find Sleidanus leading a wandering life for two years, and finally making Strasburg his home, although he still kept up a political correspondence with France. Sleidanus had been accustomed to copy all docu­ments bearing upon the Reformation to which he had access, and Bucer, who had seen his collection, proposed to Philip of Hesse to appoint him historian of the Reformation, giving him a salary and access to all necessary documents. After some delay the heads of the Schmalkaldic League agreed to Bucer’s proposal, and Sleidanus began his great work and finished the first volume in 1545. In that year he was again recalled to diplomacy and went to England in a French embassy to Henry VIII. While there he dili­gently collected materials for his history. On his return to Strasburg he was sent by that city as one of its repre­sentatives to the diets of Frankfort and Worms ; and thence he proceeded to Marburg to explore the archives of Philip of Hesse. The Schmalkald War interfered with this work and also prevented the payment of Sleidanus, who in his difficulties applied to England for aid, and at Cranmer’s intercession received a yearly pension (not long continued) from Edward VI. In 1551 Sleidanus went to the council of Trent as representative from Strasburg, charged also with full powers to act for the imperial cities Esslingen, Ravensburg, Reutlingen, Biberach, and Lindau. On his return his friends got him appointed professor of law in Strasburg, and he was once more able to give his whole attention to his great work, which he finished for the press