have been severed. Extirpation of the abdominal sympathetic has not led to obvious disturbance of digestion or nutrition in the dog. It is noteworthy that the sympathetic inhibits con­traction of the musculature of the stomach and intestine, while the other, the vagus, portion of the autonomic system excites it. The actions of these two components of the system are, therefore, mutually opposed on the viscera innervated by both.

*Action on the Circulation.—*The blood supply of most organs is under the control of vasoconstrictor nerves. All vaso-con- strictor nerves are sympathetic. Organs to which vasocon­strictor nerves are supplied either poorly or not at all are the lungs, heart, liver, brain and probably the skeletal muscles. The blood vessels of certain parts of the body have, in addition to vaso-constrictor nerves, nerves which relax their muscular wall, vasodilatator nerves. The latter are never furnished by the sympathetic, they are in the mucous membranes and glands at the oral end of the body furnished by the cranial portion of the autonomic system. In regions at the aboral end of the body they are furnished by the sacral portion of the autonomic system. Elsewhere the vasodilatators when present are derived from the nerve-cells of the spinal ganglia (Bayliss).

The control of the calibre of the blood vessels by the autonomic system is of importance in several well-ascertained respects. By constricting the blood' vessels of the viscera the system is able to favour an increase of blood supply to the brain. A noteworthy instance of such an action occurs when the erect attitude is assumed after a recumbent posture. Were it not for vasoconstriction in the abdominal organs the blood would then, under the action of gravity, sink into the more dependent parts of the body and the brain would he relatively emptied of its supply, and fainting and unconsciousness result. Again, it is essential to the normal functioning of the organs of warm­blooded animals that their temperature, except in the surface layer of the skin, should be kept constant. Part of the regula­tive mechanism for this lies in nervous control of the quantity of blood flowing through the surface sheet of the skin. That sheet is a cool zone through which a greater or smaller quantity of blood may, as required, be led and cooled. By the sym­pathetic vaso-constrictors the capacity of these vessels in the cool zone can be reduced, and thus the loss of heat from the body through that channel lessened. In cold weather the vaso­constrictors brace up these skin vessels and lessen the loss of heat from the body’s surface. In hot weather the tonus of these nerves is relaxed and the skin vessels dilate; a greater proportion of the blood then circulates through the compara­tively cool skin-zone.

The heart itself is but a specialized part of the blood-vascular tubing, and its musculature, like that of the arteries, receives motor nerves from the sympathetic. These nerves to the heart from the sympathetic are known as the accelerators, since they quicken and augment the beating of the cardiac muscle. The heart receives also nerves from the cranial part of the autonomic system, and the influence of these nerves is antago­nistic to that of the sympathetic supply. The cranial autonomic nerves to the heart pass via the vagus nerves and lessen the beating of the heart both as to rate and force. These inhibitory nerves of the heart are analogous to the dilatator nerves to the blood vessels, which, as mentioned above, come not from the sympathetic, but from the cranial and sacral portions of the autonomic system.

*Skin-glands.—*In close connexion with the temperature regulating function of the sympathetic stands its influence on the sweat secreting glands of the skin. Secretory nerves to the sweat glands are furnished apparently exclusively by the sympathetic.

*Pilomotor Nerves.—*The skin in many places contains muscle of the unstriped kind. Contraction of this cutaneous muscular tissue causes knotting of the skin as in “goose-skin,” and erection of the hairs as in the cat, or of the quills as in the hedgehog and porcupine. The efferent nerve-fibres to the unstriped muscles of the skin are always furnished by the sympa­thetic (pilomotor nerves, &c.). In this case the sympathetic contributes to emotional reactions and perhaps further to the regulation of temperature, as by ruffling the fur or feathers in animals exposed to the cold.

*The Respiratory Tube.—*The windpipe and the air passages of the lungs contain in their walls much unstriped muscular tissue, arranged so as to control the calibre of the lumen. The nerve-supply to this muscular tissue is furnished by the cranial autonomic system via the vagus nerves.

*Eyeball.*—An important office of the sympathetic is the con­trolling of the brightness of the visual image by controlling the size of the pupil. The sympathetic sends efferent fibres to the dilatator muscle of the pupil. In this case, as in others noted above, the cranial part of the autonomic system sends nerves of antagonistic effect to those of the sympathetic, first through the third cranial nerves from the efferent fibres to the constrictor muscle of the pupil. This same part of the cranial autonomic system supplies also motor fibres to the ciliary muscle, thus effecting the accommodation of the lens for focusing clearly objects within the range of what is termed near-vision.

Of the afferent fibres of the sympathetic little is known save that they are, relatively to the efferent, few in number, and that they, like the afferents of the cerebro-spinal system, are axones of nerve-cells seated in the spinal ganglia. (C. S. S.)

**SYMPHONIA** (Gr. *σvμφωνια*), a much discussed word, applied at different times (1x) to the bagpipe, (2) to the drum, (3) to the hurdy-gurdy, and finally (4) to a kind of clavichord. The sixth of the musical instruments enumerated in Dan. iii. 5, 10, 15, erroneously translated “dulcimer,” in all proba­bility refers to the bagpipe (*q.v.*). *Symphonia,* signifying drum, occurs in the writings of Isidor of Seville. “ Tym­panum est pellis vel corium ligno ex una parte extentum. Est enim pars media symphoniae in similtudinem cribri. Tympanum autem dictum quod medium est. Unde, et margaritum medium tympanum dicitur, et ipsum ut symphonia ad virgulam percutitur.” The reference comparing the tympa­num (kettledrum) to half a pearl is borrowed from Pliny *(Nat. hist. IX. 35,* 23). *Symphonia* or *Chifonie* was applied during the 13th and 14th centuries, in the Latin countries more especially, to the hurdy-gurdy. *Symphonia* is applied by Praetorius@@l to an instrument which he classed with the clavichord, spinet, regals and virginal, but without giving any clue to its distinctive characteristics. (K. S.)

**SYMPHONIC POEM** *(Symphonische Dichtung, Tondichtung, Poème symphonique,* &c.). This term covers the experiments in a new style of instrumental music which first showed a co­herent method in the twelve *Symphonische Dichtungen* of Liszt. The term at present implies a large orchestral composition which, whatever its length and changes of tempo, is not broken up into separate movements, and which, moreover, illustrates a definite poetic train of thought that can be expressed in litera­ture, whether it is actually so expressed or not. Thus the form of the symphonic poem is the form dictated by its written pro­gramme or unwritten poetic idea; and so it is not every piece of “ programme music ” that can be called a symphonic poem. Beethoven’s sonata *Les Adieux,* and his *Pastoral Symphony,* are, for instance, works in which the poetic idea does not interfere with the normal development of sonata style required by the musical nature of Beethoven’s material.

Great disturbances in musical art have always been accom­panied by constant appeals to external literary ideas; and there is nothing peculiarly modem in the present tendency to attack and defend the rising style of large indivisible schemes of instru­mental music by unprofitable metaphysical discussions as to the claims of “ absolute music ” against “ music embodying poetic ideas.” New art-forms are not born mature, and in their infancy their parent arts naturally invite other arts to stand godfather. If the rise of the sonata style was not accompanied by as much “programme music” as the new art of the present day (and as a matter of fact it was accompanied by a good deal), it at all events coincided with highly Wagnerian discussions

@@@, Sec “ Syntagm. mus.” pt. ii., *De organographia,* pp. 72, 73, 178 (Wolfenbüttel, 1618).