formed by continued observation of cases and by amassing an abundant material.

Some months ago, Dr. C. F. Martin suggested to me a statistical study of systolic murmurs as they occurred in the medical records of the Royal Victoria Hospital. I am indebted to the authorities of the hospital for their kind permission to carry out this suggestion and I have to thank Dr. Martin for much assistance in the arrangement and revision of the work.

It must be admitted that the term "Functional Murmur" as at present usually employed, is a misnomer. On the one hand, *all* murmurs are functional, whether due to organic disease of the heart or to a malady of the blood itself, inasmuch as they depend on an impairment of function of the valves, or the parts in their immediate vicinity, or else to eddies abnormally carried in the course of the circulation. On the other hand, what are usually called functional murmurs, are often, indeed very often, due to a degeneration of the heart muscle, be it in the cells of the wall itself or in the cells of the papillæ or trabeculæ.

It is difficult to define functional murmurs in any other way than as temporary murmurs occurring in a heart with no other signs of valvular disease, and which ultimately disappear. This will exclude the organic murmurs which from time to time cannot be heard at all even when extensive valvular vegetations occur, and will admit of the term being applied where chlorosis, typhoid fever, etc., occasion murmurs through the altered conditions of blood or heart muscle. Hence we would say that temporary parenchymatous degeneration of the myocardium produces functional (not organic) murmurs.

Leube[1] has recently analysed the various conditions under which systolic murmurs occur and the requirements for a differential diagnosis. His classification is, briefly, somewhat as follows:

1. *Accidental Murmurs:* Systolic, heard most strongly at the base; may or may not be transmitted; no pulmonary accentuation; no increase of cardiac area.

2. *Relative Mitral Insufficiency:* Pure systolic moderately loud murmur; a weak impulse; moderate pulmonary accentuation; moderately increased cardiac area to right and left; relatively small often irregular pulse (myocarditis or myo-asthenia); history.

3. *Acute Mitral Endocarditis:* Soft systolic murmur at apex; cardiac area slightly increased to the left; pulmonary second moderately accentuated; pulse and heart impulse relatively strong, coexistence of fever or of some infectious disease.

[1] Zur Diagnose der Systolischen Herzgeraüschen, Deut. Arch. f. Klin. Med. Nov. 5th, 1896.