heart itself, but in the smaller vessels, the arterioles and capillaries; which, offering too great a resistance to the onward flow of the blood, end by causing heart-defeat.

This is not a new view of the subject. During the past ten years, much excellent work has been done upon the subject of arterio-sclerosis and its influence in causing heart disease and heart failure. Professor Barr makes good his position by a series of well arranged arguments. From the point of view taken in the address, nothing further could be required.

He spoke of the capillaries as a vast filter bed which pervades every tissue and organ. He drew attention to the fact that sometimes these capillaries in a certain part of the body are very full and at other times nearly or almost entirely empty. In one person a pin could not be inserted without wounding many and drawing blood, whereas in a neurotic person the prick of a pin might draw no blood. Apply a sinapism to a portion of the skin and notice the dilatation and filling of the arteries.

A point to which attention is frequently called throughout the address is the relationship and the difference between potential and kinetic energy. The force of the heart is expended in sending blood into the arteries. Some of this force is manifested in the onward movement of the blood, while some of it is stored in the arteries as potential energy to be again manifested as kinetic energy in the capillaries. If there be mush-resistance in the arterioles to the flow of the blood, much of the heart's action will be expended in lateral pressure on the arteries, or in potential energy. At a later moment this potential energy is shown as kinetic energy, or in the movement of the blood in the capillaries. Thus it may be that the heart's action may be strong but the arterial flow slow, and followed by a rapid capillary blood-flow. The higher the potential energy in the arteries, or the slower the flow in them, the higher will be the kinetic energy in the capillaries.

Much attention is paid to the effects of gravity on the blood pressure in various parts and organs of the body. In this connection the vasomotor nerve system plays a most important part. Were it not for its power to control the size of the vessels we could not assume the erect position, and the potential energy in the arteries would fall so low that the kinetic in the capillaries would become so reduced that the blood would contain such a quantity of CO<sub>2</sub> as to convert us into cold-blooded animals.

The two opposing views as to whether the first line of resistance in the vascular system is in the arterioles or the capillaries are discussed. Professor Barr takes strong grounds in favor of the opinion that it is to be found in the small arteries. We mention that this view