several topics embraced in the research. At some future time I hope to publish in extenso the data accumulated.

Technique.—Experimental research into the technique consisted of an investigation into the choice of vessels by which blood could be transferred from one individual to another with the greatest certainty under the best control. Transference of blood from vein to vein, though easy of technique, was uncertain in the rate of flow, and had little power of overcoming resistance. By using an artery of the donor the blood was driven across under a certain amount of pressure, with a uniform rate of flow, readily overcoming a considerable resistance and supplying fresh oxygenated blood.

In using the peripheral artery of the recipient, it was found that the back pressure and peripheral resistance interfered with the free flow, and the valves of the peripheral veins interfered with the flow from the artery of the donor. The proximal vein of the recipient, therefore, being the direct channel to the right heart, seemed the natural and most available route. The only possible objection was that of the possibility of forcing a clot direct to the right heart.

The question of clotting at the site of anastomosis was eliminated by the use of a mechanical device instead of the Carrel suture. Dr. S. J. Mixter presented the writer an ingenious device in principle, not unlike the Murphy button. From this and from the original cuff method of Payr was developed our present instrument, which is now made by Messrs. J. C. Ulmer & Co., of Cleveland. By means of this tube anastomosis may be made so that intima is in contact with intima alone, without damage to this structure and without the possibility of any foreign body coming in contact with the blood stream. The tube has proved as successful in the clinic as in the laboratory.

In the clinical transfusions we have utilized the radial artery of the donor and any superficial vein of the recipient. The radial artery was chosen because it is easily isolated and may be readily adjusted in position to the vein of the recipient. Unless contraindicated, the donor and the recipient are each given a hypodermic injection of morphin twenty minutes before the transfusion. Before they enter the operating room, after their arms are prepared, a nurse places over their eyes a wet towel with the explanation that the eyes must be protected from the bright light to prevent headache. The donor is placed upon an operating table of the Trendelenburg type so that should he faint he can be readily lowered. The recipient is also placed upon an operating table with his head in an opposite direction from the donor. By the use of an infiltration anæsthesia of 1-10 per cent. solution of cocain, about 3 c.m. of the radial artery is exposed and the smaller branches uied with pieces of very fine