7. A final issue concerns a possible alternative solution to the problem of finding human organs for transplantation, something still very much in the experimental stage, namely xenotransplants, that is, organ transplants from other animal species.

It is not my intention to explore in detail the problems connected with this form of intervention. I would merely recall that already in 1956 Pope Pius XII raised the question of their legitimacy. He did so when commenting on the scientific possibility, then being presaged, of transplanting animal corneas to humans. His response is still enlightening for us today: in principle, he stated, for a xenotransplant to be licit, the transplanted organ must not impair the integrity of the psychological or genetic identity of the person receiving it; and there must also be a proven biological possibility that the transplant will be successful and will not expose the recipient to inordinate risk (cf. Address to the Italian Association of Cornea Donors and to Clinical Oculists and Legal Medical Practitioners, 14 May 1956).

8. In concluding, I express the hope that, thanks to the work of so many generous and highly-trained people, scientific and technological research in the field of transplants will continue to progress, and extend to experimentation with new therapies which can replace organ transplants, as some recent developments in prosthetics seem to promise. In any event, methods that fail to respect the dignity and value of the person must always be avoided. I am thinking in particular of attempts at human cloning with a view to obtaining organs for transplants: these techniques, insofar as they involve the manipulation and destruction of human embryos, are not morally acceptable, even when their proposed goal is good in itself. Science itself points to other forms of therapeutic intervention which would not involve cloning or the use of embryonic cells, but rather would make use of stem cells taken from adults. This is the direction that research must follow if it wishes to respect the dignity of each and every human being, even at the embryonic stage.

In addressing these varied issues, the contribution of philosophers and theologians is important. Their careful and competent reflection on the ethical problems associated with transplant therapy can help to clarify the criteria for assessing what kinds of transplants are morally acceptable and under what conditions, especially with regard to the protection of each individual's personal identity.

I am confident that social, political and educational leaders will renew their commitment to fostering a genuine culture of generosity and solidarity. There is a need to instill in people's hearts, especially in the hearts of the young, a genuine and deep appreciation of the need for brotherly love, a love that can find expression in the decision to become an organ donor.

May the Lord sustain each one of you in your work, and guide you in the service of authentic human progress. I accompany this wish with my Blessing.