PROSTHETICS IN SOME ASIAN COUNTRIES*

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There has developed in recent years a stronger awareness of rehabilitation problems in Asian nations. While it is true that the blind and the deaf had had programs already developed for them, the increased interest sparked by World War II nevertheless found prosthetics an excellent project around which to develop and evolve other rehabilitation activities. This has been because prosthetics offers a fast and dramatic demonstration of rehabilitation which is easily understandable by a great majority of the population. A BK for instance comes in hopping or leaning on his crutches, but comes walking out after rehabilitation. I dare say that in Asian nations, prosthetics has played a major role in initiating a rehabilitation project and in affording opportunities for rehabilitation ideas to be absorbed and expanded upon. Indonesia gives us an example. Starting out as a crude limb shop, the Solo Project has burgeoned out into a large sprawling comprehensive center counting on solid support from both the government and the civic organizations.

But prosthetics in Asia cannot be as simple as transplanting Western prosthetics to Asia. The problems are certainly different, enough anyhow to make one think twice before he can say he is sure he has the right solutions by the simple expedient of knowing Western solutions.

Many of the amputees in Asia belong to the working class in rural areas. They will have to contend not only with the mud and the rain of the villages but also with those of the flooded paddy fields. A simple peg-leg does not seem to be entirely satisfactory. Again, very few of these workers wear shoes for everyday use. Unless they are willing or can afford to wear shoes every day, they will find it more convenient to leave the prosthesis in a corner of the house. The heat and the perspiration in tropical weather wear out leather and wood and metal much faster than in temperate countries. Repairs and replacements would come in bigger volumes. These materials, especially metal and wood, will have to be imported in some countries, and even leather in others. This entails great difficulties, particularly involving exchange.

Again we realize that progress in prosthetic rehabilitation depends on a developed professional corps of engineers, chemists, prosthetists, physical therapists, occupational therapists, etc., and on a level of industrialization high enough to supply us with the necessary know-how, machines and tools, and materials. All this presupposes an economy that can bear the costs. International helping agencies may aid in initiating a project, but we like to think that the ultimate objective is for the project to develop enough so as to be able to stand by itself, in the sense that projects in western counries are able to stand by themselves.

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I hope I am wrong when I say that Asians carry a strong tendency to depend too much on their government. And since there is no great network of helping organizations as you have here, nor systematic coverage by insurance, unless the government agrees and/or can afford to pay for all limbs, the problem of who is going to pay is a recurring and vexing one.

The questions that would come up therefore in examining prosthetics programs in Asia are:

1. how large is the need?
2. how is this need being met?
3. what part of the prosthetics set-up should receive emphasis?
4. what can be done to make the project as self-sustaining financially as possible?

In the light of these impressions, I would like to give you an idea about the directions prosthetics development has taken in some Asian countries.

PROSTHETICS IN THE PHILIPPINES:

Prosthetics in the Philippines is very new. The Prosthetics and Sensory Aids Service at the United States Veterans Administration in Manila keeps a few homemade beat-up crude pieces of junk that served their wearers as prostheses. It was only in 1945, right after the war, that we saw modern artificial limbs at the United States Army Hospital, and the set-up of machines and tools and materials that went with their manufacture. The need also for the para-medical sections of Physical Therapy and Occupational Therapy hit us with a great impact. All this appeared of the greatest importance to us at that time because of the large number of war-time amputees hobbling around without limbs. We were helped to a great extent in our prosthetics project at the National Orthopedic Hospital by the United States Army training some of our key personnel in Prosthetics, in Physical Therapy, and in Occupational Therapy. At about the same time we received a donation of machines and tools from a philanthropic citizen who was helping amputees get limbs. That started off our prosthetics project with some solid foundation. Since then we have sent one technician and one physician abroad for training specifically in prosthetics. Other physicians have undergone training in Physical Medicine and Rehabilitation and one technician in Orthotics. Now we are at the threshold of a five-year graduated program of prosthetics development with Colombo Plan aid—in machines, tools, materials, and in apprenticeship training. We ultimately hope to establish a certification board. The number of our amputees approximate that of any other nation in the world. We get them from tumours, vehicular accidents, industrial accidents, disease.

Our limbs are paid for by the government usually in the case of our indigents—by industry through the Department of Labor—by insurance—and by private patients. Veterans get their limbs free from the United States Veterans Administration or the Philippine Veterans Board. Our paraplegic braces at the Spinal Center of the National Orthopedic Hospital are financed by the Women's Auxiliary of the National Orthopedic Hospital —a fine example of a small but very effective group of civic volunteers.

PROSTHETICS IN VIET NAM:

The Prosthetics Shop at the Saigon Rehabilitation Center was started about two years ago under a United Nations expert. This is a well-equipped set-up under the Army. It uses local wood and leather. I have seen some ankle joints (metal) imported from the Solo Center. To my mind, this may be a mechanism to help stimulate greater production and greater sufficiency within the area, a situation that seems desirable at the moment for

historical reasons and for financial reasons. Plastics Prosthetics has been started. A United Nations Physical Therapy expert has started work. The government pays for the limbs.

PROSTHETICS IN INDONESIA:

Indonesia is a country that started off with absolutely no facilities at all but now boasts of an adequate and modern prosthetics program. Local leather and local wood are used. The Solo Center can manufacture joints and metal parts from crude metal. Several ministries support the Center. Most of the limbs are paid for by the government—the Ministries of Health, Labor, Social Affairs, Education, etc. Civic organizations support indigents and children.

Indonesia supplies Viet Nam with metal joints.

PROSTHETICS IN LAOS:

Laos has no prosthetics program. At the present writing, the Army imports finished limbs from a private manufacturer in Saigon. Needless to say, there are fitting problems.

Laos is aware of this and is eager to start a project. With international helping agencies, she is at the planning stage of a prosthetics rehabilitation program. Because, however, of her small population, there has been some thinking as to how big a shop she should develop in terms of complete manufacture and/or simple repairs.

Summary

Most Asian countries are aware of their needs in prosthetics. They know that they may have to develop modifications to meet the particular needs of their climate and their people. They are also cognizant of the fact that their prostheses would have to be of the simplest and of the cheapest manufacture. In that sense they would like to use their own local materials. But plastics holds a particular fascination for them. It seems capable of cutting corners both in manufacture and in financing!

Before I close this brief essay, I should like to thank Mr. Tosberg and the AOPA for inviting me to share with you some of the prosthetic problems facing Asia today. I know that I am not alone when I say that Asia is deeply indebted to the more highly developed nations in this world who, in teaching and guiding her, have been more like a group of big brothers to Asia.

Thank you.

PUERTO RICO FACILITY OPENS

Manuel De La Torre, C.O., has opened his own establishment at Santurce, Puerto Rico. This is operating as the Orthopedic Appliances and Corrective Shoes of Santurce at 1505 Loiza Street, Santurce, P. R. Mr. De La Torre was formerly head of the brace establishment at the Rehabilitation Center in Harmarville, Pittsburgh. He received his training under Charles Goldstine at the Institute of Crippled and Disabled in New York City.