

# University Report

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## UNIVERSITY REPORT

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**COSMO PIETERSE:** Two discussions this week, the first comes from Sierra Leone and is on adult literacy and economic development. The second deals with some important new work connected with soil erosion, and comes from Lesotho, a mountainous country whose acute problem of good soil being washed and blown away is probably shared by other high steep areas, as well as low, flat ones.

That report is on GULLEY EROSION AND TIME SPAN PHOTOGRAPHIC ANALYSIS, but now to the Extra-Mural Department of Fourah Bay College, University of Sierra Leone. A recent involvement of the Extra-Mural Department of Fourah Bay College in the country's fight against illiteracy was the organising and holding of a three day seminar and workshop for instructors and organisers of literacy classes, at the Audio Visual Centre in Freetown from June 24th to June 26th 1971. This three day seminar was organised with the objective of equipping instructors and inspectors with the right tools, attitudes, approaches and methods necessary for them to function efficiently in their various roles; some of the topics covered at this year's seminar and workshop, which was the first ever held in Sierra Leone included:- the psychology of

COSMO PIETERSE: adult learning, syllabus planning, the use of Audio Visual Aids in decreasing illiteracy and the practical teaching of English.

One of the lectures was on: "Adult literacy as a major contributory factor in Sierra Leone's Economic Development" and was given by Mr, V.J.V. Mambu, Lecturer in Economic Analysis, and a Lecturer at Fourah Bay College's Extra-Mural Department.

Ronald Buck asked Mr. Mambu to relate his lecture to the objectives of the seminar:

MR. MAMBU: Well, first of all let us look at it from a very general broad question: What are the objectives of education? Now broadly speaking we can answer, or at least attempt to answer the question on the two main categories. The first one is one which is directed to the individual, the objectives here include the inculcation of knowledge, the acquisition of skills and the development of attitudes, that's one aspect of it. This you can categorise under the term 'traditional adult literacy function'. The second one would be in fact related towards society and this is what I was mainly concerned with. Here we talk of the provision of adequately trained man-power with reference to industrial and commercial needs.

ROLAND BUCK: Would you say that the emphasis should be on functional rather than on traditional literacy?

MR. MAMBU: Yes, well both actually, but I think that the emphasis for my purpose should be more on functional rather than the traditional, I mean it is an outcome of the traditional anyway.

ROLAND BUCK: This seminar was organised for voluntary teachers and inspectors of literacy classes at the various centres all over the country. How efficiently can these teachers function if their educational standard is not up to university level, or middle secondary school?

MR. MABU: That is why we are training them, or giving them the necessary tools: to be able to impart their knowledge that we have also imparted into them, to these people. Actually they are dealing with virtual illiterates - people who have never been exposed to education. By education here I mean book-learning. Now they are teaching them to read and write, this is a very simple operation which one does not need a university degree to do.

ROLAND BUCK: I am thinking of the incompatibility of the force that you would get with the turn out university graduates, could you comment on this?

MR. MAMBU: Yes. Well there is this problem, people are beginning to fear in fact that we are getting to reach almost a bottle neck where in fact you've got University graduates without work at the moment as compared to earlier, but there is a tremendous amount of room. For instance, there are secondary schools, there are a lot of schools that need graduate teachers, I mean there is a tremendous amount of room for them. Now if we had them all going into the classroom, or even helping outside the walls of the University, you know like the Extra-Mural work that we are doing, I am sure they can help because you must remember that the percentage of illiteracy in this country is pretty high.

ROLAND BUCK: How do you see the role of the adult literacy teacher as a major contributory factor in the economic development of the society?

MR. MAMBU: Well he has a very important role to play because he is in direct contact with them, and he's be able to communicate with them and as a teacher to try and impart into them what he or she has acquired. And not to try and let the individual forget all he has learnt about, but if he had learnt about certain things that he was doing wrongly I think it would be a good thing for the teacher to point out to the individual that well, yes this might be okay, but this is the wrong method of doing things, and I think you ought to do it this way. And if they equip them with the knowledge of reading and writing they will be able to at least fit themselves into society in which they find themselves, and at work. This can also bring good relationships between work people in the same area.

ROLAND BUCK: Can you foresee positive results of this exercise?

MR. MAMBU: Yes indeed, indeed we are quite sure. I mean if you want to hold a kind of survey, I mean going into the various areas, you will find out those who have in fact gone through these adult literacy classes, are much better than those who have not gone through, because they now know, I mean if they were measuring things with their hands or fingers, they can now read the simple rules, they are able to measure adequately. I mean these are things you can easily find in a lot of the industries we go to.

COSMO PIETERSE: Mr. V.J.V. Mambu, lecturer in Economic Analysis, talking in Fourah Bay to Ronald Buck.

It has been decided that starting from the next academic year, the National Literacy Committee working closely with the Ministry of Education and Fourah Bay College, will hold three seminars and workshops annually, it is further planned that participants at these seminars will also take part in a one week residential course at Fourah Bay College. In addition, plans are under way for the production of literature in Sierra Leonean Languages for the use of students at the adult literacy classes now numbering well over two thousand.

Now to TIME SPAN PHOTOGRAPHIC ANALYSIS and its use in the fight against soil erosion. When Allan Macartney spoke to Dr. Peter Lardner of the Biology Department of the University of Botswana, Lesotho and Swaziland, on his research into gully erosion in Lesotho - gullies are called "dongas" in many parts of Southern Africa - he first asked him what his work in TIME SPAN PHOTOGRAPHIC ANALYSIS deals with:

DR. LARDNER: Briefly it deals with the utilisation of existing photographs, photographs taken by members of the Colonial Service in Basutoland in 1935 and a comparison of these photographs with photographs taken in 1970. This technique, which is termed time-span photographic analysis, can be used to demonstrate on any single donga or gully the amount of growth or the amount of reclamation that has taken place during this thirty-five year period.

ALLAN MACARTNEY: Now you mentioned the date 1935, what this already a problem in 1935?

DR. LARDNER: It's apparently been a problem in Lesotho since King Moshoeshoe I and the Basotho nation settled here with their domestic stock, and it has become an increasingly greater problem as the population has increased to the extent today that reliable estimates place within the 11,000 odd square miles of Lesotho, some 50,000 large dongas, and the Soil Conservation Division of the Ministry of Agriculture would indicate that out of these perhaps 100 could be reclaimed each year, so that we have a situation where it would take 500 years to replace a lot of arable land in Lesotho.

COSMO PIETERSE: Dr. Peter Lardner, Biology Department, U.B.L.S. on photography and soil erosion in Lesotho. As it is, the topography of Lesotho is characterised by high mountains with extremely steep gradients, and these aggravate the erosive effect of the elements. After the rain, torrential streams pour down the sharp slopes, carrying away tons of good soil. And what about man? Here Allan Macartney takes up the discussion with Dr. Lardner.

ALLAN MACARTNEY: Now you mentioned earlier that this problem dates back to the colonization of Lesotho by the Basotho nation when they first were formed under Moshoeshoe I. In other words, was it the people who created this problem?

DR. LARDNER: Most likely there were dongas when the Basotho nation arrived here, but man has an unhappy characteristic of aggravating existing environmental problems. The increase in the human population, and the associated increase of the population of domestic stock has resulted in an over-grazing problem which removes plant cover from these

DR. LARDNER: areas of high gradient. One of the most effective means of controlling erosion is to have a staple vegetation cover. When this has gone then the soil goes and with loss of soil one finds initiation of donga formation.

ALLAN MACARTNEY: I've heard it said in another country, namely Botswana, by one expert in the field, that what he would like to do is to abolish the goat, and then he felt that this would solve many problems. Is this the problem in Lesotho, goats eating all vegetation, or is that an over simplification?

DR. LARDNER: I think it's an over simplification. To speak of it in very general terms it is on the whole the large number of domestic stock; goats, sheep, cattle and horses.

ALLAN MACARTNEY: And all of these strip the vegetation off the soil, and this leads to the problem? Now what are you hoping to do in this project, are you going to provide the answers to the problem, or what is the aim behind this research?

DR. LARDNER: Well, we're not necessarily concerned with providing the answers. Actually the answers, in many respects, are already here, the Soil Conservation Division knows what has to be done to stop donga formation and to retard the growth of the visiting dongas. One of the basic problems is that the people of Lesotho, many of whom have not been away from Lesotho, are not aware that dongas are not normal topographic features. When you grow up next to a donga, and you've seen it get larger and larger during your life, you just begin to take it for granted. What we hope to do is to demonstrate by

DR. LARDNER: this time-span photographic technique, that is a comparison of a photograph taken in 1935 of a particular donga with a photograph taken in 1970 of the same donga, that these things are in fact dynamic topographic features that they are growing - and try to drive this home. So in a sense, this particular project has as its basis an information aspect, or an educational aspect; the problems relating to reclamation of existing dongas are the province of the Soil Conservation people.

ALLAN MACARTNEY: Now this seems all to add up to one thing, namely that this is really a social problem, it is not the technical problem knowing how to stop them, but how to change people's attitudes. In this presumably your research will help, am I right on this?

DR. LARDNER: To some measure, obviously with 50,000 large dongas there is a rather immense technical problem involved, just purely and simply in getting rid of these things by various reclamation procedures. But without the help of the people who live near the dongas, and without their understanding that by engaging in certain preventive techniques they can help to arrest the growth of the donga, and therefore save their arable land, there is very little hope. It's our desire, then, to provide this information

COSMO PIETERSE: Allan Macartney talking for University Report to Dr. Peter Lardner of the Biology Department of the University of Botswana, Lesotho, and Swaziland on the fight against soil erosion to save the land for its people, and for me amongst many others, interesting angles of this work a particularly exciting aspect is

COSMO PIETERSE: the use of the art of photography for practical, everyday down-to-earth purposes. Listeners will recall a recent report, also on the use of photography - a Nigerian students' pursuit of AERIAL PHOTOGRAPHIC SURVEY for the study and improvement of land use.