FRANCIE LUND

Procedings of in house workshop

DEVELOPMENT STUDIES

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Development Studies Unit
University of Natal, Durban.

I N D E X

PROFESSOR L. SCHLEMMER. CENTRE FOR APPLIED SOCIAL SCIENCES.

The first study I would like to mention is a study of land tenure in an area which typifies much of the transition taking place in large areas of Kwa Zulu. The project is being conducted by Catherine Cross, with assistants, and it covers communities in the Valley of a Thousand Hills area. It focuses on what one may term the social values relating to land tenure and the interests of black people which impinge on land tenure. A major feature of the study is that it sheds light on changes, the spontaneous organic changes, which are taking place in the land tenure system. The study uses interesting indirect techniques and is altogether a very intensive study. A report will be out very soon - hopefully within weeks.

Another project, which we have in C.A.S.S., which is relevant to development, is a fairly large on-going study of Black advancement. You will hear some aspects of this from Mr. Allen, who is studying the issues at the blue-collar and technical level, but other parts of C.A.S.S. are looking at Black advancement at the executive and decision-making level. We are working at this stage mainly in Industry. An initial major report will be out in approximately three months. A post-graduate student, funded by the project, has already looked at the black supervisor in industry, and the disertation has been completed. This project is focused on industry at the moment, but many of the general principles and problems can be extended to the field of black decision-making generally in both the private and public sectors.

Another C.A.S.S. project which is relevant is one that I am conducting with Davine Thaw. This is an investigation of what we call "Cognitive Adaptation" among urbanising Black people. This problem hasn't been looked at much in the past. It is essentially a study of the degree to which people find it easy or difficult to grasp certain very subtle aspects of the unwritten and unstated culture of the modern system. This is a study in which we are looking as critically at the modern system as we are at the 'traditional' values, and we are also looking at the people who are as it were trapped in between the two worlds. These are the people who, although urbanised, are trapped in a kind of culturally alienated situation by policies which separate off the black people and allocate them to townships in which a dominant cultural pattern is perpetuated, which might be an "interstitial culture", but also has unique characteristics of its own.

The main purpose of the study is to consider the cleavages in everyday culture and see to what extent these impede opportunities to absorb the more subtle expectations which the industrial and administrative system generates. We have produced a provisional report and I am hoping that the final report will be available within six months.

We have done a number of studies of squatters in and around Durban, and recently Dr. Møller and I have contributed an analysis of the needs, aspirations and identifications of squatters in the Durban Area to the planning team involved in the Inanda Development Plan being formulated for consideration by the central Government.

I think these are the projects in C.A.S.S. which are closest to the fields of Development studies. Under a different hat, in my broader capacity as a Professor at the University, shall we say, I am involved as interim Director at the InKatha Institute, which is at the moment exploring various development strategies for communities in Kwa Zulu. Inter alia, we are considering the establishment of a Mobile Clinic in peri-urban areas as an impetus for development - a kind of moving "service centre". This programme will have to be evaluated very carefully and C.A.S.S. will assist in the evaluation.

We are also looking at the training needs of village and community health workers with a view to producing relevant training materials. A very large Inkatha Youth Camp Training Programme is presently getting under way and the Inkatha Institute is contributing curricula in the fields of general business and office skills, leadership training, elementary community development and assisting with the identification of development needs in the communities which will be served by camp trainees. The placement of these trainees in communities will be evaluated by us to assess their impact on development. These programmes have been provisionally approved by the Kwa Zulu Cabinet and by the Central Committee of Inkatha, but, understandably, there is a great deal of work to do to mobilize the resources and to produce the materials.

More generally, I might add, as an academic, my concern and my real interest in Development Studies lies at the level of community motivation, which I feel is one of the very critical challenges in the field of development.

MR. D.I. BRANSBY DEPARTMENT OF PASTURE SCIENCE.

My objective this morning is to draw your attention to the contribution of the Department of Pasture Science and secondly to the activities of A C A T, which is the Africa Cooperative Action Trust. I say draw your attention to, not in the sense of that we are blowing our trumpets, but because we have made a very small contribution to Development Studies in Pietermaritzburg and would simply like to make you aware of what it is.

The Department of Pasture Science has representation on the Subsistence Agriculture Study Group, which will be outlined in more detail by Professor Lea later in the day. We contributed at the symposium, Rural Studies in Kwa Zulu, at the end of last year. I see our role mainly as one of extension in Development Studies, and in January, 1981, on the request of the Department of Agriculture of Kwa Zulu, we gave a four week course in Farm planning to the Extension Officers. These Black Extension Officers - a group of about ten - have Agricultural Diplomas from a government College in Kwa Zulu and they requested that we give them the course. Although their plans cannot be implemented at the moment, they are required to plan tribal areas as if the plans could be implemented, hoping that in the future they are going to get funds to implement them.

Their training at the moment is very crop production orientated, and they do not get very much in terms of general farm planning and particularly veld management. As a result of that farm planning course, they felt that they would like more information of veld management and so late last year they asked if we could give a short course in veld management. We did that during a week in Janaary this year, and then more recently I spent the day giving a short workshop to a group of indunas from a tribal area in Bulwer. This was actually arranged by A C A T and it was the first time that I have ever had the opportunity of working through an interpreter; I had my doubts about how successful it was going to be before we started, but it turned out most successful, and I think I will elaborate on that a little later.

The last point here is that we have offered to plan a University Farm for the University of Zululand. This University is planning to mount a degree, and possibly a diploma, in Agriculture. I am glad that Professor Booysen is here because I have mentioned it to him before and both he and the Principal certainly did not think it was a good idea. So perhaps you could think about this, and when it comes to discussion time I would welcome any

comments on whether you feel that it is a necessary thing, bearing in mind that there is a lot of work afoot at the moment to allow Africans to come to the Agriculture Faculty in Pietermaritzburg.

I wish to draw your attention to A C A T, for those of you who do not know about it. It is a Christian Development Agency which aims to spread Christianity while helping tribal Africans to produce their own food. Their motto is "Food, Faith and Work for Africa". These people are doing a tremendous amount of very good practical work in the tribal areas. What they do is establish what they call "savings clubs" and families aim at saving a package of R20,00. From this they are able to buy sufficient fertilizer and weedicide to cultivate a quarter acre of mealies. I have not gone into the finer details of this, but they claim that this can feed six people for a year if they get a good crop.

Leading on from that, I would like to elaborate a little more on my contact with A C A T. So far, it has only been in one region and it has been related to Chief Ngubane in the Bulwer area, who has an extremely large tribal area. This fellow has a very interesting background and the reason why I tell you about him is particularly for the Sociologists, who may see some research opportunities in this area. He is an unique man; he speaks English very well; his father died when he was six and his mother brought him to Edendale where he grew up. He then went to Johannesburg after finishing matric and he studied as a male nurse in one of the hospitals up on the Reef. While he was working at the hospital, he played professional soccer for the Moroko Swallows. They then tried to get him to come back to take up his position as Chief, but he was not interested. Eventually they subpoenaed him and got him back, and he has now got his heart and soul into the job of improving his tribe's lot.

He has a very big tribe with nine wards, with a Councillor at the head of each ward, and I would like to put up a list of the problems that this man is tackling - some problems which a lot of us think are impossible to solve. Firstly, finance: finance is always a problem in developing tribal areas. This man has closed up certain of his (what he calls) "grazing yards". Fortunately these are in the Tall Grassveld region, and if you rest that region, the veld grass will grow reasonably tall. He is harvesting this grass, and last year he harvested about 26 railway truck loads of thatch, which brought in about R12 000,00. He puts this into a Tribal Fund.

As far as education is concerned he has certainly stimulated, and is making a concerted effort to educate his Councillors. The other thing I would like to point out here is that a lot of them are old men. Most of the 13 people who came on this one-day workshop were over the age of 50. He is, I would say, in the region of 35. The other point about education is that one of the biggest detractions for the African in agriculture is the image of agriculture. One of the causes of this is that the school teachers often punish the children by making them work in the garden and do agricultural tasks, and he has tried to do away with this in his areas.

Fencing. Apparently, the Kwa Zulu Government offered fencing to various Chiefs a short while ago. He accepted it and he is actually practising rotational grazing. He recognises that you cannot farm properly with huts scattered all over in the mountains, and widely scattered over the area of land that is under his control, so he is gradually moving his people together into proper villages, and it is incredible how he is achieving this. Those who do not want to conform he does not bother with, and he simply provides more facilities, such as water, for the ones who have moved and slowly the others are coming.

He is investigating markets for cattle and for produce; he is practising very good grazing management because of the resting system that he is applying for thatch harvesting. Stock improvement: he is looking into the possibility of getting good bulls which will be the only bulls used by the tribe, and he is doing away with all the other bulls that roam around.

And finally, (something that I thought was very novel in the tribal atmosphere, or tribal circles), he is looking for a Lady Councillor. He is a true "Democratic", if you like to call it that, and he feels that women in the community should be represented, and I am sure that Professor Nattrass will like that idea.

DURING QUESTION TIME MR. BRANSBY.

The other thought I would like to put into the minds of the people here today is the possibility of using the young men in the Civic Action Unit of the Army. I know that they are being seconded to the Kwa Zulu Department of Agriculture - but I wondered if the Development Studies Unit made an application to the Defence Force whether they would not be prepared to second people to this Unit as well. I know they certainly second people to Fort Hare and the University of the North.

DR. V. MØLLER. CENTRE FOR APPLIED SOCIAL SCIENCES.

I would like to talk to you about Quality of Life in Development Studies.

One of the major problems in Development is that although everyone wants development, they are not quite certain what they actually wish to achieve. People in the street will seldom stop to think which aspects of their lives should be improved and in which order. Also they might not speculate on what will happen after this development has taken place.

At the macro-level decision takers switch and shift and the development orientation of the moment may well depend on fad and fashion. In short it would appear to be a good idea to keep a running tab on needs and wants in development in order to adopt a more consistent and systematic approach.

In my ten minutes I should like to very briefly outline some on-going research in the Centre for Applied Social Sciences which seems to identify development priorities among the different sectors of the South African population.

As a starting point, we at the Centre thought it might loosely be referred to as "Quality of Life". Let's imagine that the "good life", or if you prefer, "images of the good life" embrace a large number of development goals or values. These values would include both ends and means and personal values as well as institutionalised ones - such as education for example. In our research we set about trying to identify a "package" of value parameters which would adequately describe the "good life" for South Africans in terms of our conceptual model. In a preliminary inquiry among a number of Whites, Indians and Blacks in the Durban area, respondents were asked to select a limited number of items representing a variety of life goals or values and to select only those which were very important to them. To give you an example of the items we used in our study, we referred to: your family life; your home; the money you earn; the job you hold; wages and prices; your ability to achieve your goals in life, or to having fun. By aggregating the individual value choices which emerged from this exercise, we arrived at a first approximation of a "value package" for each of the population groups in the survey.

Then in a second exercise, the degree to which values or goals were perceive to be satisfied was assessed. When Social Scientists talk about "Quality of Life", or more correctly, "subjective quality of life", they are usually referring to such a set of satisfaction ratings. In the

strictly technical sense, "Quality of Life" corresponds to the degree to which the values in the package are satisfied.

Quality of Life measurements can provide a useful, albeit a relatively crude indication of the level of development achieved. In our Durban research, we discovered that the Black group surveyed had consistent and strikingly different development priorities from the White group. For instance, the group of Black respondents tendentially indicated that the fulfilment of a variety of basic material or subsistence needs would greatly improve their "Quality of Life". It must of course be remembered that they were making their choice within a number of degrees of freedom. By contrast, the Whites and to a lesser degree the Indians in the survey, were more pre-occupied with achieving what are usually called "higher order" or "self-actualisation" goals.

Currently, we are refining the original set of social indicators used in this preliminary research so that an assessment of quality of life can be undertaken on a national level. Incidentally, we are also including more conventional "hard" social ijdicators in the set. We feel that it is essential to measure quality of life at regular and frequent intervals if we are to keep track of progress made in the process of development. A single quality of life study can only provide a base line from which to observe trends; we shall need to conduct quality of life studies more often. It is our conviction that regular assessments of quality of life should form an essential part of Development Studies.

It is worth noting that quality of life trend data should prove useful both in formulating and revising development policy and in evaluating the effects of development in people's lives. Regarding the formulation and revision of development policy, quality of life studies should assist in keeping track of shifts in needs and aspirations which need to be accomodated in development strategies. Quality of life observations should also help us to identify emergent goals which are replacing older needs, which might meanwhile have been satisfied, or possibly devalued, because people's aspirations or expectations are changing.

And finally, as far as the evaluation of development is concerned, the regular monitoring of satisfaction levels, that is - the monitoring of subjective quality of life - will help us to discover the heartfelt success stories of development. Under which circumstances do people really feel that things are getting better for them ? This is possibly the most

significant use to which quality of life research can be put, and we hope Development Studies will make full use of them.

PROFESSOR SCHLEMMER IN ANSWER TO A QUESTION:
regarding conducting quality of life studies at the community level. Would the approach described be appropriate and useful ?

We are, quite shortly, as Dr. Møller said, going to be assisted by the H.S.R.C. to apply the research tool described nationally, but we hope in conjunction with the C.S.I.R. to pinpoint typical rural communities and to apply modified versions of the research instrument there.

We are planning a technical workshop to try and develop strategies for this in the near future with the H.S.R.C. and the C.S.I.R.

But certainly, the research instrument will have to be modified and that is a very valid point. We would also like to use those community studies in order to assess the first problem and that is:

How valid is a particular set of social indicators of the actual quality of life on the ground ? To what extent is it reflected in objective circumstances and patterns of life styles ?

DR. S. PARKER. ACCOUNTING, DURBAN.

My activities have been in connection with black businessmen. In Natal and Zululand there is a black chamber of commerce called Inyanda, which has about four hundred members, mainly small traders. It is one of seventeen branches of the National African Federated Chamber of Commerce and Industry, better known as NAFCOC. The President is Mr. Sam Motsuenyane, who has been President for about 14 years. Inanda, the Natal and Zululand Chamber, has an Education Committee and the continuing education that it has offered to its members has consisted of two things: one is a small booklet containing miscellaneous topics on managing a business particularly a small retail one. Examples are merchandising and how to run a checking account. They have also developed, in connection with the Musgrave Rotary Club, a twelve lecture audio-visual series on general business activities, again primarily aimed at small retailers. I approached the chairman of their Education Committee, Mr. Rodolo, to see if I could contribute something. From what he told me, their Education Committee apparently had no contact with any tertiary education institution here in Natal.

Their general need, as enunciated by he and several members of his Committee, is simply continuing education for their members. In other words, their members don't feel that this booklet is sophisticated enough for what they are doing. That is about as well as he could identify their needs for me. To identify their specific needs, I'm approaching it on a two-step basis. Firstly, to identify some needs that are common to all small businesses. Needs which, based on my own background, are applicable whether they are black-owned, white-owned, manufacturing, retail, what have you.

Two problems readily came to mind. One is the management of cash, in that an organisation in the long run goes "bust" if they don't make profits. In the short run, it's simply because they run out of cash for some reason or other. Secondly, the general problem of choosing between alternatives, particularly in the acquisition of fixed assets. So far as attempting to fulfil these needs, I have offered to provide a half-day seminar on cash budgeting and a day seminar on the second problem, which is the alternative choice decision.

The second step involves identifying the needs of small black businessmen here in Natal, particularly the members of Inyanda. I see offering these two seminars as an entree to these people. With the seminars, or in the

seminars, there is the possibility for some level of trust to be developed and be present. What I plan to do is during the lunch period and tea breaks give them some sort of discussion question to do in pairs or triads. It is essentially to ask them to talk about what they see their problems are as a businessman, and hopefully to get them to reduce those problems to writing.

Having begun to identify their problems as a small businessman, I think we can begin to determine what needs to be done in order to begin to solve those problems. I think those needs can probably be characterised as: learning needs; and other needs, such as capital, land tenure system revision and that sort. The learning needs, I think University related people could do something about as far as beginning to solve them or help the black businessman. The other needs which exist, I don't think a University has the resources to have much impact on.

As the situation stands now, I have left it to the Education Committee to arrange the time and places of the seminars and I would be prepared to present them. I anticipate two or three problems in relation to the seminars. How homogeneous will the attendees be, particularly in relation to their type of business that they are concerned with ? Secondly, at what level to pitch the seminars ? I have been to a meeting of Inyanda, and looking at the cars present, I can unequivocably say that they are all successful businessmen, but I don't know in an educational situation what their capabilities are. Thirdly, can they identify their problems, and are they actual problems, or are they mere symptoms of some sort of underlying problems for thenselves as businessmen ?

In the covering letter that Jill sent out earlier, she asked about possible roles for the Unit. A possible role would be to have some sort of a clearing house index. It would consist of persons within the University who are interested in participating and what their skills are; in other words, the suppliers of skills. It would also have an index of persons who are doing something in development, and have some sort of description of their project. The possible users of skills; then either users or suppliers might look through the cards, file or whatever of the other, and see if they can contribute, assist, or if there are persons with useful skills that could be called upon.

PROFESSOR SCHLEMMER.
I think that the problem of trust in co-operative situations is a very general problem affecting people at all levels of material development, and I think this is a very interesting illustration of it.

DR. V. ERLMANN. MUSIC.

Most ethnomusicologists would agree that ethnomusicology began when in 1885 the American physicist Alexander John Ellis measured the scales of 'various nations' - as he put it in a pioneering essay - and concluded that

> "the musical scale is not ... 'natural' ... but very diverse, very artificial, and very capricious." (Ellis 1885:526)

Ellis' study was the first that empirically acknowledged the fact that musical intervals - properties of sound - are not physical but social facts. Nevertheless it took ethnomusicology more than half a century to realize its importance as a 'key subject in the social sciences' (Blacking 1974). It has now become common knowledge among ethnomusicologists that the rules that underlie social behaviour have significance for the processes involved in the creation and recreation of musical sound. In fact, the idea advanced in 1964 by Alan P. Merriam as the most widely accepted definition of our discipline that ethnomusicology is the 'study of music in culture' implies that patterns of social organisation and patterns of sound are related to each other as a result of human interaction. It follows from this theoretical perspective that ethnomusicology has to concentrate on music as a process rather than a product.

Similarly, if ethnomusicology is ever to be more than purely descriptive musical ethnography, it will be not unlikely that ethnomusicologists will have to revise most of their research methods since taken for granted. The transcription of music, for example, one of the basic ethnomusicological techniques, will probably only begin to be an accurate tool and more than a convenient aid of memory for folklore students when it relates the playing techniques to sequences of social events (Blacking 1974:82). Musicology and musical ethnography may legitimately confine themselves to studies of musical structures as autonomous products, but the future of ethnomusicology as a discipline in its own right and as an essential part of a wider complex of related studies will ultimately depend on how quickly these premises will be accepted and to what extent some of the points I will make will be realized.

Ethnomusicology in South Africa in particular has yet to broaden its perspective and to rethink its theoretical and practical potential. Certainly, any young discipline has to go through naive periods and it is unquestioned that pioneers of South African ethnomusicology like Percival R. Kirby and Hugh Tracey produced valid pieces of musical ethnography. But it is now becoming

a crucial question for ethnomusicolocy in South Africa to what extent it can contribute to the solution of some of the urgent problems that characterize our situation.

In the following I will briefly outline the role of music in the social and cultural development of South Africa and the value of ethnomusicology for the study of such developments. Finally, I shall concentrate on what I believe to be essential tasks of ethnomusicology in the context of development studies.

The assumption that music is part of the ideological superstructure and as such has always developed and responded to social and cultural change, does not necessarily imply that ethnomusicology has to confine itself to a passive role as neutral observer with little relevance to applied social studies. Nor does the reflective nature of music mean that it does not have potential as an active factor of change. Despite the many 'passive' functions of music such as to provide entertainment and emotional relief in situations of stress and social tension - situations that are likely to stimulate development rather than prevent it - some music may deeply influence the course and direction of social and cultural changes. Because music is part of the super structure and not - as J. Blacking maintains - of the "infrastructure of human life" (Blacking n.d.:5), it can play an essential role in development processes, and it is precisely here that lies the principal interest of music to development studies in the broadest sense. Just as it is misleading to reduce the active potential of music to political propaganda (Blacking n.d. 1), it would be incorrect to understand the affirmative functions of music only as providing pleasant, but unnecessary additives to something else. I would like to explain this further in concentrating on one of the fundamental concepts of urban anthropology and of what one might call one day urban ethnomusicology.

Adaptation is probably the most relevant concept that connects both studies of social dynamics and ethnomusicological studies in the most direct sense. The lesson that we are taught by the history of popular urban African music in South Africa, for instance, is clearly that music was a highly effective cultural medium that not only reshaped and re-ordered cultural categories relevant to the urban social environment (Coplan 1980:40). In some cases it even provided the fundamental framework of communication without which some of the adaptive urban institutions such as stokfel rotating credit associations could not function (Coplan 1980:230). Similarly, modern urban music provided positive images of urban culture to the urbanising where other

media of communication failed. And it incorporated positive elements of traditional social organisation and cultural conseptualization of reality within the performance situation itself. For instance, the idea of urban solidarity based on common social, economic and cultural interests of autonomous African communities is inherent in most traditional African music that underlies most urban synthetic styles. Blacking observed that Africans in

> "producing different kinds of sounds ... preferred to create a performance situation that was un-economical in terms of cost-efficiency. That is, sounds that could have been produced by one person are shared amongst two, three, or more people, and the intensity of reciprocal social interaction required for performance is correspondingly much higher."
> (Blacking n.d.:16)

Performances of African urban music even in the most syncretic forms made transition to the urban context acceptable in that they maintained values of solidarity in the face of an alien and oppressive system of cost-efficient division of labour. That is why the adaptive function of music was rarely limited to mere uncritical adjustment to a fatally unchangeable social environment.

Even more Westernized styles such as makwaya black elite choir music were not limited to slavish imitations of Western models that were propagated by mission schools. Although this type of music was probably more functional as a vehicle of integration than any other music, it retained distinctive African features. These later became expressive idioms of African nationalism that were understood by urbanizing, unwesternized Africans long before conscious nationalist thinking massively spread among the urban population. 'Nkosi Sikelel' iAfrika' only became the anthem of the ANC 20 years after it had been composed as a piece of makwaya music.

In fact, the imperfections of compositional technique that some musicologists sought to discover in the music of such composers as Benjamin Tyamzashe (Hansen 1968, Huskisson 1969:285), were conceived by Africans not as distortions but as adaptations of Western models to African traditional music. For when it came to imitations of pure Western hymn styles African composers were quite aware of the techniques required. For example, "Hayi Abant' Abamnyama' (Ho, the black people') composed by B. Tyamzashe in the late 1920's, is a song of lament on the death of D.D.T. Jabavu which contains both examples of neo-African elite music and "four-square European hymn" (Blacking 1969:48). Ironically, this latter type of music

"is not ... a pathetic example of 'black Englishman' applauding the music of the dominant culture." (Blacking 1969:48).

It rather emphasizes "the bleak consequences of European domination" (Blacking 1969:48), and illustrates the bitter criticism inherent in words like these:

"They say take out your special, take out your pass./
You brew 'kill-me-quick', I'll give you cuts./
You make yourself the boss of the Amalaitas, I'll give you cuts./
You don't work properly, I'll give you the sack."
(Blacking 1969:48).

If the adaptive function of music in an urban context implies that music can provide metaphorical ways of thinking about change and experiencing change, then one of the chief values of music for development studies is that it affords direct views of the way people present their culture to themselves. The fact that the seeds of African nationalism were contained in early makwaya elite choir music illustrates that social change may in fact be expressed in music long before it materializes. Furthermore, if we understand development studies in a more restricted sense and contend that many development programs in the Third World failed as a result of a maladjustment of revolutionized, foreign modes of production and basically traditional modes of thinking without production, and if we agree that music can in fact in anticipation create powerful and acceptable images of change and if ethnomusicology is to be the study of such music, it must be given special attention in any research program that focuses on change.

Yet, it is not quite clear whether this means that music can also play a role in development programs in the classical sense. Blacking, in speaking about music in development programs in Zambia, for instance, rather optimistically believes that

"an initial change of roles for music-making could prepare people for .... subsequent social changes." (Blacking n.d.:18).

He further observed that

"several Venda groups organised themselves for music-making before they used their musical organisation as a base for other, non-musical activities." (Blacking n.d.:18).

If it is possible for mine management to make effective use of competing dance teams to divide workers and weaken their solidarity, and if publicity agencies use basic sociological views of black musical tastes to market coca-cola or skin lightener, then there is no reason why music could not be positively used to create consciousness, awareness, and preparedness for change.

Music may not bring about change, but it surely can create collective awareness of a need and a potential for change.

Until further experience allows for more insights into possible ways of integrating music into strategies of development, one premise has to be made. For ethnomusicology, development must ultimately be a process that enables all people to participate in the same rights and to have a just share in the natural resources and products of labour. More specifically, with regard to music and the particular South African situation, this means that ethnomusicology can only justify itself if it aims at the definition of a new African cultural identity and the restoration of African autonomy. Just as, for instance, economical development of the 'homelands' cannot be meant to provide only minor cosmetical changes that do not challenge the idea of the homelands as such, ethnomusicology cannot be the same as the official promotion of 'state' folklore.

But it is precisely here that the chief dilemma of the definition of an African cultural identity has always been. Namely, that under repressive conditions of racial segregation Africans had to create "a model at once authentic and modern, indigenous but not isolated, Black but not ethnically exclusive". (Coplan 1980:395). African cultural nationalism faced and is currently facing the difficult task of how to "mobilize the symbols of tradition without retreating into the devisiveness of ethnic-regional parochialism" dictated by apartheid (Coplan 1980:391). It is not for me to define what African cultural identity is, but ethnomusicology has to show that those who have to define it, should turn to traditional music for creative models. That is, ethnomusicology can only hope to play a role in the development of an autonomous African cultural identity, if it succeeds in showing convincingly that the adequate expression and the stimulating metaphors of African self-determination exist in traditional music, and that the musical equivalent of political and economic equality is not an equal share in the consumption of mass produced Western popular music.

Perhaps the greatest challenge for ethnomusicology in South Africa, however, is to find creative ways of establishing African cultural automony. If D. Coplan is correct in assuming that "strivings for autonomy guide the major processes of change in African performance culture" (Coplan 1980:389) and if African music has in fact signed away much of its autonomy through its incorporation into the white dominated entertainment industry in the 1960's, then "the struggle ... between the mass entertainment media and the African community for the means of cultural production" (Coplan 1980:409) must ultimately become the chief concern of ethnomusicological research. Cultural and political autonomy are vital

conditions without which no musical culture can flourish.

Conversely, heterogenously controlled arts are usually a sign of declining socio-economic systems, capitalist and state-socialist alike. Therefore development for all cannot be separated from attempts to encourage and establish cultural autonomy. The least ethnomusicology could do in this respect is to look for strategies that have been used in the past to achieve autonomy and to communicate these to those who need them in their present struggle. The most it can hope for is that what it offers will be accepted.

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PROFESSOR ELEANOR PRESTON-WHYTE AFRICAN STUDIES.

The research that I want to describe very briefly to you this morning started off, I must admit, with no development angle to it at all. It arose out of pure curiosity. I have, however, come to see that what I have been investigating - local African Tourist Markets - has development potential, and as I have been drawn, willy-nilly, into active involvement in the problems of the market women I have been investigating, I have become involved also in what might be termed "Action Anthropology", in that the research now has a development angle as I will indicate.

Now the initial research, as I said, developed out of a long term curiosity about the small African stalls and even larger market complexes which have grown and proliferated over the last 15 - 20 years along the side of the South and North Coast Highways. From cursory glances as I drove past these stalls, they appeared to be manned entirely by women, many of whom could be observed making items, such as grass mats and beadwork, that they wanted for customers. Even a quick enumeration of the range of wares for sale, however, indicated that many items, such as clay pots and wooden and soapstone carvings, while possibly and probably made by Africans, must have originated elsewhere than in the close vicinity of the road. In addition, especially in markets nearer to Durban, there are numerous items that are clearly non-African - factory produced goods and Taiwanese imports in fact. How did these get there ? In addition to material goods some, but by no means all, stalls stock fresh fruit and vegetables - bananas, paw-paws, pines, avo's in season, guavas, sweet potatoes, even pumpkins. Were these locally grown by the women traders, or more likely, given their volume, were they bought from middlemen ?

I became fascinated then firstly by how all the goods sold at the markets got to the roadside - whose initiative was behind it and what sort of profits were involved ? Was it indeed an example of indigenous ideas and business enterprise, or particularly in the case of foreign goods, was there some hidden external mastermind to be discovered ?

Enlisting the help of a colleague at the University of Zululand, Daphne Nene, I began to track down what here turned out to be an extremely complex and surprisingly diverse network of trading links, which stretch from the point of sale at the side of the road far into the hinterland of Natal and Kwa Zulu and even beyond - indeed to as far afield as Swaziland, Maputa and Zimbabwe, not to mention Taiwan. Fascinating also is the fact that although

there is no single outside mastermind and the individual traders take most of the initiative, there is a network of links which include also White and Indian traders, and the whole network is indeed a microcosm of inter-ethnic commercial involvement in Natal and in Southern Africa as a whole.

Aside from the commercial sphere, we have been interested in the question of what sort of income is derived by the women from marketing, and, here comes the development angle - to what extent this type of tourist marketing could grow to give more than a bit of extra cash to supplement wages, and could provide a viable and large income in its own right for Zulu women.

With an eye to future possibilities and planning, I decided to study both small stalls - often literally one woman shows - in Northern Natal, where tourist traffic though growing is not very high, and contrast them with the large market complexes of the South Coast, where over 100 to 200 women sell together at one spot and where the benefits of the high South Coast tourist trade and the proximity to Durban must affect sales and trading interactions. Indeed the latter have proved so fascinating as to develop into what is virtually a project on its own account. Of particular interest was the documentation last year of the building and moving of the indigenous stalls into a formal tourist market complex by the KwaZulu Development Corporation, (I may add that the design of the new market was drawn by our Architectural Department - but included, it seems, no female architects). Also of note was the subsequent disastrous effect on this complex of the opening of the new Coastal Highway, which bypasses the market completely and thus removes a good deal of casual trade from trippers and passing traffic. Here the researcher is presented with the problem of what to do - or to try to do in such an instance - and of the <u>possible</u> uses research may have in future road and locational planning at the regional level. What I hope specifically is that when the new national routes are planned and designed for the North Coast, we may be able to incorporate into them at the design level a permanent market or markets of this type, which will have easy access from the roads.

Another possibly important spin-off of the research for development planning has been the detailed material I have been able to collect on <u>the constraints experienced by the women traders in developing and diversifying their businesses</u>. I hope to extend this part of the study later this year into a large scale study of the participation of Black women in so-called informal

sector in Kwa Zulu and Natal.

A word about methodology and research problems. So far I have relied very largely on the anthropologist's standby - participant observation and involvement in the total marketing scene. Some survey work was done on these markets by other academics at the University of Zululand before Mrs. Nene and I began our studies. This has served to assure us that we have not neglected any important variation in trading patterns in Natal and Kwa Zulu. Their results were, however, fairly superficial, and our objective has been to obtain depth material. While covering a wide range of activities and transactional links, we have attempted to concentrate on qualitative micro-analysis. We have, however, included car counts and time budget studies at selected markets and have collected basic socio-demographic data on women selling in these markets. My particular area of interest has been to document selling activities in the markets themselves and then to follow up the trading chains which end at the markets and this has involved contacting and visiting personally middlemen and producers of all ethnic groups.

The collection of satisfactory economic data has been the most difficult research task - for both the obvious reason that this is a sensitive and private area, and also because few of the women keep regular accounts. It is only by winning people's trust and continual personal checking that this can be obtained adequately - and then one wonders if it can, indeed, be used in publication.

Perhaps my greatest problem has been finding time along with lecturing commitments for the type of research I have outlined - personal participant observation - literally spending 12 - 14 hours a day, firstly in the markets themselves, and then many more hours in tracking down and visiting personally the middlemen and producers - this has indeed taken me all over Kwa Zulu, and also as far afield as the Reef. Luckily I could combine one such trip with external examining, but time has been and still is my major problem.

Following from this, one thing that this Development Studies Unit might seriously consider would be the establishment of a rotating research Fellowship, which would enable academics to leave their teaching posts for a time and join the Unit in order to do fulltime research. Possibly, this could be combined with the direction and training of students in the same field of study as themselves, and so the research and teaching functions of the Unit could be pursued concurrently.

Thank you very much.

PROFESSOR SCHLEMMER IN COMMENTING:

I think we have had two extremely useful suggestions from Professor Preston-Whyte, and I think that the one directed to the University is something that we can consider quite easily, but the one on the design of major through-roads is vitally significant. If one looks at the history of world urbanisation, transportation breaks or interruptions, the fundamentals in creating the modes of development, and this is an appeal, I think, from Professor Preston-Whyte to engineers; here is a real challenge.

PROFESSOR PRESTON-WHYTE.

I think that I would like to make an appeal to the architects as well. In fact, our architecture department was involved in planning the Kwa Zulu Development Corporation Market, and I think that it was on the whole very successful. What they didn't do, however, was any participant observation; none of those architects ever went down and sat in a market for a whole day, so they didn't know, in fact, what is needed and what is uncomfortable in terms of the physical environment. The stalls they designed, for instance, let rain in on both sides, and are open to the wind and the dust. With a bit of thought, these problems could have been avoided.

MR. BROMBERGER.

Can you tell us something about the longer study of the informal sector you are planning ?

PROFESSOR PRESTON-WHYTE.

What I want to do in the future research, which I hope is going to begin in July, is firstly to make follow-studies of a number of the women that I have contacted and met in the market, because I find that many of them are not only selling at Umgababa , but they are also moving into the rural areas, and into the townships as well, doing other informal sets of activities; for example, running Tupperware Parties and selling cooking pots, food and clothing, in fact, diversifying very very actively and widely. Then there are other women who are producing the goods which come into the market - I'm going to do case studies of them as well.

And another very important aspect that I'm going to look into is the reasons why some of the women involved in producing and selling fail or have got to

a level beyond which they cannot progress further. It seems to me that what we need to look at in detail are the constraints on women in a particular situation at the moment and at what lets some of them spin off into the so-called formal sector.

The other thing that I'm going to do is choose one or two sample areas in rural Kwa Zulu and simply do community studies to see exactly what the women are doing in terms of making money in these areas - areas situated away from the main roads. I think I know pretty well what the women on the sides of the roads are doing - but what are women doing in the rural hinterland to make money ?

PROFESSOR NATTRASS.

I just want to make a comment. I think obviously your sample is women - but I think it would be very interesting to compare your results and constraints with wider studies that have been done on small business - persons - some of them are not going to be female.

PROFESSOR PRESTON-WHYTE.

Well, yes, I agree and will do this; however, the money I have got is for studying women ! I think it is an under-researched area anyway, but obviously cannot be completely or fully isolated from the total scheme which includes men also.

PROFESSOR KRIGE.

I would just like to say how important I feel these studies are in highlighting the enterprise of the African himself in solving his own problems. These women have very often no land to cultivate and they cannot contribute then to the family income, and this is the kind of alternative that they themselves have evolved, and I want to point out how we Whites so often come in - cooking up a new marketplace - with our ideas which we want to force on people without ever consulting them and very often we stymy all the spontaneousness by not leaving enough to the people themselves and encouraging them. We put our own stamp upon everything - we dictate "this you need", "that you need", "you ought to do this because" - we think that they want just to repeat everything that we do, but, in fact, they have everything to contribute to their own development.

QUESTION.

Are these stalls quite independant, or are the women selling for other people; are these, in fact, independant businesses ?

PROFESSOR PRESTON-WHYTE.

They are very small businesses - the women are certainly not simply agents in any sense at all. There is a general myth, I think, certainly in the White community, that these women act as agents for other people, but certainly I would deny this completely. Traders come down and sell them things, but that is not the same thing as running the stalls. Those women regard themselves as the individual agents completely; moreover, they take things from a whole lot of different sources and traders and make a lot of their goods themselves.

PROFESSOR SCHLEMMER.

One question. I've noticed a tendency among people who grow their own produce, or who buy produce from local producers to sell by the roadside, to have a policy of profit-maximization and not optimization. In other words, they don't trade profit off against turnover, and have you seen this ? There is a problem here which is worth looking at.

PROFESSOR PRESTON-WHYTE.

This is a very definite area of problem and I am going into this now - I have got some material on this.

QUESTION.

How successful has the K.D.C. market complex proved to be ?

PROFESSOR PRESTON-WHYTE.

This is difficult to answer conclusively. In the long run it would probably, I think, have improved matters - but it was never allowed to run its full course. The opening of the new road intervened. One might ask why the market was situated so far off the road - indeed the new road was already planned. But before the opening of the new road, the new market was picking up - it was taking off - a lot of the women still had some doubts about it, but others were quite happy and satisfied with it. And only time will tell now. There are very few buyers at

the market now, except over weekends, but Easter may well bring the Tourists back.

MR. R. ALLEN CENTRE FOR APPLIED SOCIAL SCIENCES.

I wnat to tell you briefly - to give you just a thumb-nail sketch - a modest outline - of one particular investigation which is presently taking place in C.A.S.S., which could be said to be relevant to the field of Manpower Development. I'll be speaking about work that I am involved in and also Miss Sylvia Wella - I'll try to account for Sylvia's work as well.

We are, in a sense, jointly involved in studies to investigate or look at problems associated with Black advancement in Commerce and Industry - White-controlled, by and large, Commerce and Industry. I say that because one can come up against the challenge that some of the problems are of an ethnocentric nature. The background to the studies is ostensibly a perceived shortage of skilled manpower in certain strata of employment. Essentially, we are looking at lower and middle management in Miss Wella's case- and what I would call upper level blue-collar workers in my case. Now the reason for examining these strata is a desire at present to promote Black manpower, in both cases the ostensible motive being a perceived shortage of skilled personnel. In the case of the blue-collar worker, we consider this to be very largely the case, although possibly in the case of lower-management strata the motive is really more a desire to achieve some sort of parity in the distribution of people employed.

So, our focus in the studies is on those sorts of populations. We're looking at people who are in what I would call the "predicament" of either competing for advancement or having been recently advanced. Now this predicament is complex, obviously, but by analytic purposes, we could pretty roughly break it up into problems which arise out of environmental causes, and problems which are more of an individual nature. An example of environmental problems would be: obstacles in the work situation of various kinds, and individually located problems are perhaps problems of aptitude, skill and so on. In the case of Sylvia Well's study, which is looking at lower and middle management, she is concentrating on environmental obstacles to Black advancement. But she does hope to relate this to certain individually located problems, particularly those which could be traced to recent environmental problems. She is interested

for example, in the self-concept, self-image, of young Black executives, who find themselves in a new situation. She is also interested in more specific negative opinions of, or attitudes toward, the situation in which they find themselves. She is interested in their perceptions of their working environment, of how they see their predicament in a conscious sense. She is also interested in getting a feel for certain more unconscious psychological characteristics which would describe these people, which are perhaps relevant to their inter-action, their behaviour, their performance in this advancement predicament; characteristics, in other words, which may be assisting them or handicapping them.

In the case of my own investigation, which is looking at skilled blue-collar workers, I'm at present concentrating more on individually located problems. I am interested in the orientation of the individual towards industrial work, and in particular, to the challenge of advancement. Remember, that in this level of employment, there's a higher portion of what you might call migrants or transitional people.

Now, who are we looking at ? In Sylvia Wella's case, she is looking at recently recruited or promoted Blacks in managerial or administrative jobs in the Durban area, and, in fact, from as far afield as Stanger, I think, on the North Coast and Amamzimtoti and Pinetown. She hasn't found very many of them, so she had actually just found a sample which consists of the entire population of such persons as she had been able to locate. She is looking at their self-image, their self-confidence, various personality variables. She is asking them for an account of their experiences at work - she is also looking for a specific catalogue of perceived obstacles to Black advancement in management.

In my own case, my investigation embraces quite a range of variables : fairly deep seated psychological factors, opinions, values, reported social inter-actions at work, and also perception of obstacles to Black advancement.

The nature of this sort of investigation imposes certain problems, problems of trust, communication and so on. In order to cater for these, we have tried to pioneer or adapt certain projective techniques. At the moment both studies have been fielded; a large quantity of projective data has been recovered. We are content-analysing it - in this I have been assisted by Mrs. Anita Craig. We have discovered significant variations in the areas on characteristics we want to look at, and

significant relationships are emerging. As Professor Schlemmer indicated, reports are going to press at the moment.

My own interests are, you might say, the psychological concommitants of development. I am also interested in initiating a study which will look at the idea of "quality of education", and devise some sort of instruments which would enable us to measure this.

PROFESSOR SCHLEMMER.

I would like to point out that even though, as I said before, this research is located in the industrial setting at the moment - throughout Africa and indeed the Third World, the problem of the development of an effective administration is critical. As a matter of fact, more and more development agencies throughout the world are beginning to realise that the effectiveness of bureaucracies and the executive decision-making in bureaucracies, which must perforce be indigenous, is critical, and I think that work would slot in.

PROFESSOR SCHLEMMER: In answer to a question regarding the advisability of research into local administrations.

I think that there is scope, although the scope is relatively limited; one of the problems, of course, of the bureaucracy is that industry steals its must successful products, and it is precisely when people move into the executive levle that they are whipped out.

MR. M. MCGRATH ECONOMICS. DURBAN.

The research which I have undertaken over the past few years has not been exclusively concerned with questions of economic development, but it does impinge on that field. Two areas on which I have worked concern the distribution of personal income, and the distribution of personal wealth in South Africa. Economists make a very clear distinction between income and wealth ; income is the flow that adds to the purchasing power of individuals and households through time, whereas weath relates to the stock of assets, which contribute part of the income which accrues to households.

One of the indicators which has been used (and until 15 years ago was used almost exclusively) to make inferences about the level of development of economies, is per capita income. It was found that this measure does not convey sufficient information about economic welfare, because per capita incomes do not indicate anything about the proportion of the population in poverty or about the proportion of the population in lower income groups. Before we can make inferences about the effect of the growth of an economy on economic welfare, we need to know something about the distribution of income. This is the point from which my research in this field started.

We know a lot about what has happened to the growth of per capita income in South Africa, but relatively little about what has happened to racial incomes. I first of all looked at the growth of racial incomes over the period from which calculations could be made, the period from 1946/7 until about 1975 and found that economic growth had widened racial income disparities up to the 1970's, but after that the ratio of White per capita income to African per capita income had started to narrow. Thus we initially had widening racial inequality, then narrowing inequality. The second stage of this research, which as yet has not been completed, is to try to estimate inequalities within the racial groups, and between urban and rural areas. This research is nearing completion, but as yet, I have not got concrete results which can be tied together.

The research has enabled me to make an appraisal of the sources and quality of the data which is available, and this should at least provide a benchmark for economists to measure more precisely the effects of economic growth in future decades. This research has shown the inadequacies that exist in the data; there is relatively little data available on Black incomes, and further one needs to be able to correlate the data on income which is avail-

able with the sources of income, family sizes, participation rates, educational levels of families and so on. Ideally one should be able to link these variables together in a multi-variate analysis which would explain the levels of income and the causes of income inequality. As yet, this cannot be done for South Africa. There are, however, two useful sources, which could be tapped: the Current Population Survey of the Department of Statistics, and the 1980 Population Census. The C.P.S. was set up to measure rates of Black unemployment, but it can also be used to probide demographic data and incomes. The Department of Statistics may be willing to supply the census tapes to Universities and the Development Studies Unit might be able to share the cost with other interested Departments.

There is an almost total absence of data which will allow the estimation of the distribution of income in rural areas, and the Unit will undoubtedly make a contribution to filling this gap.

The distribution of income is also affected by the imposition of taxes and by the provision of services from the state at free or subsidised rates. One of the most evident characteristics of developing countries is an urban bias in the provision of infra-structure and services such as health and education.

I have attempted to estimate the racial distribution of taxation and have also attempted to estimate the racial distribution of expenditure by the state. These estimates have been at the most crudely aggregative levels since they have been in terms of racial averages - and have not tried to break the welfare budget down by income group or by region. The results are interesting since they show that some redistribution has occured, but that this has been very small. For example, in 1975/76, the average per capita burden on Whites (i.e. the amount by which their tax contribution exceeded the estimated benefits which they received) was a mere 6% of White per capita incomes. The corresponding amount of redistribution to Blacks was a mere 10% of Black income.

A considerable amount of research can be directed into this field by identifying inequalities in access to services provided in both urban and rural areas to Balcks, and further Unit's research might also prove useful both in collecting data from the field and in establishing the demand for the various forms of services which the state can provide. Possibly the most useful framework which could be adopted here, is that of the basic need strategy,

which explicitly concentrates on identifying at the community level the demands for health services, education, water and social services.

My second area of research, the distribution of wealth, in the main lies fairly far outside the narrowly defined field of economic development. What I have done as a logical corollary to my work on income distribution is to try to estimate the distribution of personal wealth in the economy. The results support what one would expect intuitively, for the estimated White share of personal wealth takes up most of the total - in fact it is about 96% of the total. The next stage of that research has been to try to identify the extent of inequality with the distribution of wealth for the White, Coloured and Asian groups, and also the major sources of wealth within those groups. This has been done by drawing Estate Duty Returns from the Master of the Supreme Court in Pietermaritzburg. I drew a complete census of estates for the year 1975, and if one assumes that people who die in any given age group are a random sample of the living in those age groups, then one can transform this data, using morality multipliers, to represent the wealth of the population. At the moment I am busy analysing the results.

The significance of this research for development arises because the research can identify the potential for the taxation of wealth, which can be used as a source of finance for the development of the underdeveloped regions of the economy. The results here are quite startling. The major form of wealth taxation which we have in South Africa is the Estate Duty, which is imposed on the estates of people who have died. Through time, the relative contribution of this Estate Duty to total Government revenue has dropped markedly from 4,5% of total Government revenue in the 1920's down to 0,01% at present. In America the Estate Duty contributes 2,3% of the Federal Government Revenue. If the Estate Duty in South Africa were increased to yield a similar proportion, it would contribute as much as 30% of the total grant from the Central Government to the Black States. This could indeed provide a useful additional source of finance for development. In the field of wealth taxation there is an extremely important source of revenue which remains untapped for development finance in South Africa, and the Unit could very usefully devote research effort to this field.

MR. MCGRATH IN ANSWER TO A QUESTION REGARDING TAXATION.

One of the interesting things about the relative levels of tax burden is that the contribution of Blacks to taxes has increased over time rather than remained constant. In making this estimate, I have looked at not only

personal income taxation and head taxation, but the incidence of all taxes. As one starts to take account of Sales taxation and also portions of corporate taxation which can be shifted forward to consumers, then the rate of burden on Blacks becomes increasingly heavy.

PROFESSOR G. MAASDORP ECONOMIC RESEARCH INSTITUTE.

I have been asked to talk on behalf of the Economic Research Unit. We have a number of projects under way at the present, so I won't be able to go into any one particular project in detail. What I intend doing is just to give a brief sketch of what we have done in the past in what may be called development studies and what we are at present engaged in. The Unit has been involved fairly consistently in the field of development studies research since its inception nearly 40 years ago. In fact, the raison d'etre for the establishment of the Unit was to conduct a long-term economic and social survey of Natal, and that was for the old Social and Economic Planning Council which was the forerunner of the present H.S.R.C.

The first project that was undertaken was a study of labour resources. Most of the early work of the Unit - let's say until about the mid-sixties - was of a socio-economic nature, but in the last 15 years or so, the Unit has tended to move into the field of development planning, and during the period when we were negotiating with the University Administration to be officially named, we had in fact thought of the title, Development Planning Unit. In the end we decided on the simpler and more direct title of Economic Research Unit, but development planning would not have been an inaccurate description of the general thrust of our research.

Most of our work has been in internationally-recognised countries of the Third World, and apart from the Africa Institute, I can think of no other institution in this country which has had this exposure to the developing countries of Africa. In these countries our work has essentially been in the field of national development planning, and I can give you a couple of examples here: there was an early study of wage-employment in Swaziland (in the pre-independence period); a preliminary economic development plan for Lesotho - this was the first attempt at producing an economic development plan in that country; a report on the integration of regional planning into the second five-year plan in Lesotho; and then in the transport sector in Swaziland, a series of studies in planning for the second national development plan, the third national development plan and, at present, the fourth

national development plan. These have consisted basically of feasibility studies of investments in the road and rail sectors, using the technique of cost-benefit analysis.

These studies have had, I think a considerable spin-off. If one is doing a study in the transport sector, one has to do a detailed study of all sectors of the economy that generate traffic, and as a consequence, we have undertaken fairly detailed studies of the agricultural sector, the industrial sector including the development of small enterprises, of tourism and of manpower resources. And at the same time, we have had to examine the impact on the economy - the Swaziland economy - of membership in the Customs Union and the Rand Mometary Area. This in turn led to studies of economic relationships in Southern Africa, embracing not only the Customs Union and the Rand Monetary Area, but also the S.A.D.C.C., i.e. the South African Development Coordination Conference and the P.T.A., the Preferential Trade Area, which is meant ultimately to consist of about eighteen countries. So, we have had those spin-offs, which I think have been important, and we have also managed to draw anthropologists into our studies in Swaziland, in so far as time savings are important benefits - what are the views of the Swazi people to time saving ? Is it important or isn't it ? We at present have an occasional paper in the press on this issue.

Another important spin-off has been our liason with various missions of the World Bank over quite a long period of time - with other Aid Agencies and their representatives - with the Government of Swaziland and the private sector, and also with the Universities, both in Swaziland and Lesotho. One unfortunate aspect, and I suppose that this is a problem when one consults for Governments, is that we have been unable freely to publish our work in Swaziland. The net result of it all, I would say, is that something like 75% of the work we have done in the last dozen or so years has not been published because it is regarded by the Swaziland Government as classifiable material.

Apart from working in independent African States, we have also been active in the development field in South Africa (by that I mean the 1910 borders of South Africa). This is essentially work in regional development - in many respects it's a hybrid between regional economics and development economics, I suppose. In the Durban Metropolitan Region we have an area which straddles the boundary between the First World and the Third World, and here we are looking at the urban end of the development spectrum.

We have undertaken a study of low-income housing strategy; but this is a field we will probably opt out of now as it is one in which diminishing returns are being yielded. Many studies have been done both in this country and in the Third World; they all seem to yield basically the same results and recommendations for planning purposes, and it is now up to the Government to act. It is an area in which researchers have made an impact on Government thinking, I'm happy to say.

Then we have done a study on planning for urban growth in the Kwa Zulu areas of the Metropolitan Region, and a study on the supply of labour in the peripheral areas, and we are at present launching a project on the Metropolitan economy.

In Transkei we have done reports on unemployment and public transport.

The staff consists of three permanent fellows and one fellowship which rotates among the lecturing staff for periods of six months at a time. The rotating fellowhhip can choose the subject of his or her choice, but I think it is true to say that, given the historical legacy and also the interests of the permanent fellows, work in the field of development planning will continue to be the main thrust in the Unit. The intentions at present are to work on the following projects:
Firstly - continued involvement in transport sector planning in Swaziland.
Secondly - on economic relationships in Southern Africa.
Thirdly - a couple of projects in the pipeline in the Transkei.
Fourthly - a study on the economy of the Durban Metropolitan Region; this is in collaboration with lecturing staff - we are hoping to finalise it at the moment.
Then fifthly - the Natal regional economy study which is being done by John Stanwix, funded by the Town and Regional Planning Commission. The brief here is a very broad one, but there are three central aspects: firstly, the identification of economic regions within Natal and Kwa Zulu and an analysis of the economic structure; secondly, an analysis of inter-regional economic activity; and thirdly, economic growth projection in a regional framework. The lack of a precedent for regional economic analysis in South Africa is posing many theoretical and practical problems to the research fellows at present, but the collection of statistical data is not geared to regional economic analysis and consequently it is difficult even to start testing whatever theory is available. Nevertheless, we hope that we will be able to lay down some guidelines for data collection and to facilitate what we feel will be an important long-term area of research.

Then, our sixth project is a study of the African labour market in the Durban region. This is being done by Julian Hofmeyer and is still in fact under investigation. The project is essentially an investigation into supply-side factors affecting the wage-setting process in the market for unskilled African labour, and as we see it at the moment, it will involve some or all of the following aspects. Firstly, a micro-investigation of factors affecting the decisions of homeland residents to offer their services on the wage-labour market with particular reference to the wages and types of work which they regard as acceptable. Then, secondly, a similar investigation at the micro level of what determines the acceptability of certain job-wage combinations to urban job-seekers. Thirdly, an investigation of the operation of the labour bureau and influx control system. And fourthly, an investigation on a more aggregated level into the reasons for the dramatic rise in African wages since 1970, particularly in the hitherto low-wage sectors, such as mining and agriculture.

Finally, Mr. Chairman, the Unit has a record of close interdisciplinary co-operation. To give you a couple of examples covering the last dozen years or so: we have worked in transport projects with civil engineers, anthropologists and ecologists; in Regional planning projects with geographers and town planners; in housing projects with architects, town planners, sociologists and anthropologists. We have benefited very greatly from the teamwork in these projects and it is our intention to continue working at an inter-disciplinary level whenever possible.
I would like to assure the Department of Development Studies that we are happy to cooperate in future projects.

* Request for a Bibliography of work done in Natal.

PROFESSOR M.R. JUDD. CHEMICAL ENGINEERING.

Mr. Chairman, there are three points which I want to make and I would ask the Chairman please to stop me if these points have already been made (as I came late).

1. The first point I wish to make is that I believe our biggest problem is that of Education and it seems that we have got an incredible opportunity to make use of the Television Network, which has recently been installed for the Black people. The proposal I wish to make is that we should set ourselves up as the first University of the Air in South Africa. One sees this overseas - they make use of this educational channel - why don't we do precisely that ? We have an Audio-Visual section at this University; we have many skilled people with many ideas, and I would very strongly suggest that the Development Studies Unit consider this suggestion. I suggest moreover that we don't attempt to do what is done in Britain - i.e. don't let's just buy their programmes - we should attempt to develop our own appropriate technology programmes. We should, for example, teach people in our programmes how to make a fire efficiently under a pot; we should teach technology appropriate to the needs in this country.

2. The second point I want to make is to tell you about the Agrochemurgy complex. Has that been covered ? The Agrochemurgy complex was proposed by Dr. Robinson of Sentrachem about three years ago. The details are all published, and I'll leave some copies with the Chairman if anybody would like to study his paper which gives the detailed facts and figures.

The essential point of the Agrochemurgy complex is that it is a way to move wealth from the rich urban sector into the farming sector, which one sees could be greatly beneficial to the African farmers. The central feature of the Agrochemurgy complex is an alchohol producing plant which could accept maize or cane, convert it into fuel alchohol, which could then be used to back out fuel imports from the Arabs - so that, instead of going to the Arabs, the money would in fact go to the farmers. This is the basic concept; the problems with it are many; we are researching some aspects in our Chemical Engineering Department and there are many other places around the country researching other aspects. Research is under the control of the Co-operative Scientific Programme Unit of the C.S.I.R. One of the problems in a conventional fermentation

scheme is the effluent problem , and in the Chemurgy concept it has been suggested that this can be handled to produce algae. The algae together with some phosphates and nitrogen can then be used to feed either fish or alternatively cattle.

That is very briefly the basic concept and to put in Dr. Robinson's early 1980 figures - this is what they look like: if one considers an area of land equivalent to a circle about 36 kilometres in diameter - one could produce of the order of 3 000 000 tons of agricultural products, which in 1980 terms could be converted to 1000 000 tons of alchohol; 50 000 tons of fish and 32 000 tons of meat - a highly productive unit.

One is looking at the involvement of about 150 000 people for the operation outlined above. This is an incredibly large number of people and the sort of money that might be required to establish such a complex is in the order of R300 000 000. That comes to something like R 2000 per job created, and if you compare that against say Sasol, where you have to spend R 350 000 to create one job, then clearly this is the way one needs to go in order to get mass employment in the agricultural sector.

As far as the Development Studies Unit is concerned, the suggestion I am making is for the Unit to update and check the figures and enter into the many facets of the research programme. There are many problems, and it needs somebody to co-ordinate a multi-disciplinary demonstration of the idea. I believe that one could achieve an economic balance on a complex about one-fifth of the size that Dr. Robinson proposed, and I believe that we should go to Kwa Zulu and say that for R6 000 000 we could create one module of a Chemurgy and demonstrate that it works. Related ventures (without the alchohol part) have been initiated in Botswana, e.g. the Rooifontein Complex has been established and is working well; there is another called the Shiela Complex. I believe that we at Natal University could take the lead with a complete Chemurgy complex in our neighbouring Kwa Zulu area for a small amount of money, which I really believe could be found very easily.

3. The third point I want to make is that the Institution of Chemical Engineers is concerned about applying appropriate technology principles to the South African environment, and has in fact pledged itself to act as a clearing house for technology.

PROFESSOR SCHLEMMER COMMENTING.

I would like to raise a question about the possibility of a University of the Air. One consideration is that at University level the Black populations of South Africa are probably most adequately served in the spectrum of education because there are more varied opportunities. One of the leads I would suggest arises from the fact less developed populations need a higher quality educational interface than the more developed populations, because the need for the teacher (or teaching input) to make an impact on basic values is greater, and I think the challenge in educational technology is not only to distribute the knowledge, as it were, but to actually do better than a good white teacher. But it is a very interesting thought.

QUESTION: What income per family would a good Chemurgy provide ?

PROFESSOR JUDD.

I believe the Rooifontein project at the moment is returning to the African participants of the order of R 4 000 per family per annum.

QUESTION: Are there sociological management problems involved ?

PROFESSOR JUDD.

One of the suggestions that Robinson made when he put this forward was that the management could be done by the army in the same way as it is done in Israel.

PROFESSOR SCHLEMMER.

Which of course raises another very interesting problem Where a very well designed complex although inappropriate piece of technology is introduced into an area and managed by an army, some people are going to begin to argue about whether or not that really is development to mobilise the people. That is one point of view. Another point of view is that R 4 000 per family is R 4 000 per family. We don't argue about that.

PROFESSOR NATTRASS.

How many per family ?

PROFESSOR JUDD.

I think that Robinson was working on a basis of 4 per family.

DR. J.M. ERSKINE. INSTITUTE OF NATURAL RESOURCES.
PIETERMARITZBURG.

By way of introduction, I shall briefly mention the four main objectives of the Institute of Natural Resources. These are:

OBJECTIVES OF INSTITUTE.

(i) Land capability analysis. Natural resources survey leading to a positive rural land use strategy.

(ii) Research. Applied work that is funded largely by the private sector.

(a) Conservation of natural resources in Natal/Kwa Zulu, for example, wildlife.

(b) Rural development work in Kwa Zulu. Development systems research aimed at finding solutions to some of the pressing problems in the rural areas. The problems and projects are identified in close consultation with the Zulu people. Information gathered in the research projects will be passed on to appropriate development agencies. We aim to establish a working model in the field as an integral part of each project.

(c) Formation of a computer based natural resources data bank for Natal/Kwa Zulu. The identification of users of the bank and an assessment of their needs has been completed. Development and testing of the data bank awaits Central Government approval. We hope to have Dr. Will Craig from the University of Minnesota, who developed the Minnesota land inventory system, with the Institute for a period (on sabbatical leave) in 1983.

(iii) Co-ordination of integrated resource planning between Natal and Kwa Zulu. Promotion of contact between the two areas through data bank, research and consultation.

(iv) Education. Master's Course in Research Planning from 1984.

CURRENT RESEARCH (RURAL DEVELOPMENT) AT THE INSTITUTE.

(i) Multi-facet rural development project in Kwa Zulu Area 2.

(a) Land capability analysis of 700 000 ha.

(b) Identification of development systems research possibilities.

Both of these phases have been completed with the help of consultants and funding from Anglo American.

(c) Establishment of precursar trials and demonstrations, and the preparation of detailed developmnnt plan. This phase has commenced and is also funded by Anglo American. The project will involve the Institute, consultants, local people, Kwa Zulu Department of Agriculture and Forestry, INR students and other development groups in the University. it is also seen as a potential rural studies workshop for the Master's course which will start in 1984..

(d) Implementation of plan by development agencies.

(ii) Ecology Education Unit (Valley Trust). This Unit aims to demonstrate how a balance can be maintained between conservation of natural resources and agricultural production.

(iii) Evaluation of systems for improving the livestock situation in Kwa Zulu. The objectives of this study undertaken by Paul Colvin are:

(a) To ascertain inter-relationships between the socio-economic and ecological factors playing a role in determining attitudes to stock ownership.

(b) To obtain a census of Kwa Zulu cattle, using dip tank records as base data, and relate cattle numbers to population densities and bioclimatic regions.

(c) To investigate improved methods of livestock production in representative areas of Kwa Zulu.

(d) To investigate existing formal and informal marketing channels and assess their suitability.

(e) To establish a pilot project in a region of high potential for livestock production, giving attention to extensive pastoral grazing, semi-intensive beef production and intensive zero-grazing (feedlots).

(f) To determine the need for and feasibility of government intervention and private sector involvement in livestock improvement schemes in promoting stock improvement schemes.

(iv) Settlement, food production and consumption patterns in a rural community in Kwa Zulu. Graham Lind will be examining a rural community in depth and, by a process of building trust, determining basic needs and means of satisfying these needs.

(v) Developing an agricultural marketing system for Kwa Zulu. Mark Lyster is looking at the creation of a marketing structure which will ensure the disposal of agricultural produce at remunerative prices.

(vi) Study of wood utilization and establishment of Rural Energy Unit. Mark Gandar is presently researching the impact of wood utilization on the environment with a view to making recommendations for a woodlot/afforestation programme that will meet future wood requirements in Kwa Zulu. Next year he intends to establish a Rural Energy Unit that will have a nymber of components:

(a) Resource Centre (data bank).

(b) Rural energy projects in field (appropriate technology).

(c) Research employing a multi-disciplinary approach.

(vii) Biogas research and development projects. In this project, James Rivett-Carnac will give attention to:

(a) Promoting the technology of anaerobic digestion of wastes.

(b) Demonstrations in the field.

(c) Popularising the concept of utilizing wastes as an energy source.

FUTURE RESEARCH (RURAL DEVELOPMENT).

A number of projects have been identified and await funding, staff, post-graduate students, etc. These include the following.

(i) Population carrying capacity of the land in Kwa Zulu.
(ii) The milch goat: appropriate animal for Kwa Zulu.
(iii) Agroforestry as a permanent system of land use in Kwa Zulu.
(iv) Co-operation between White and Black farming communities in Natal/ Kwa Zulu.
(v) New crops, new varieties and better supplies of seed for Zulu farmers.
(vi) Rural development at ward level through local tribal planning communities.

FUTURE RESEARCH CONTINUED.

(vii) Transforming traditional agriculture in Kwa Zulu - development assistance efforts and policies.

(viii) Village industry potential in Kwa Zulu.

(ix) Improvement of water supplies in the rural areas of Kwa Zulu.

(x) Use of American Sweet Clover in Kwa Zulu.

PROFESSOR SCHLEMMER.

Dr. Erskine, when you talk of fairly intensive agriculture on the crests of hills, and aforestation down the slopes, do you envisage that there will be a re-settlement - a kind of closer settlement pattern on the crests - where will the settlement be ?

DR. ERSKINE.

At the present time, people are not in fact living on the slopes - they are living on the crests of the hills. There may be some movement of people into closer settlements. We have talked about this with the local people - there is no opposition as long as they can see that it is to their advantage; they are prepared to move.

PROFESSOR SCHLEMMER.

This is something that is very interesting to me because I think that it is absolutely critical to development all over. When you say that you have spoken to local people, there are many ways of speaking to the local people. Who have you spoken to ? The Chiefs, the Headmen, the Councillors ?

DR. ERSKINE.

It has been a democratic process. We have gone to the Kwa Zulu Department of Agriculture and we have said "Will you please identify the group that we ought to meet with ?", and this has normally been the Chief and his Councillors. But all meetings have been open to everyone who wants to come from the local community. In other words, they have been meetings which have been chaired by the Chief, and there have been many members of the local community present. In the course of the discussion anyone who wants to can raise a point, object, etc., and at the end of

the meeting I notice that the Chief always asks for a vote: he will say "Do you agree with this ?", and it is always put to the vote. So it is a democratic process.

PROFESSOR SCHLEMMER.

I tell you what is worrying me. I have noticed in some areas of the Transkei, for example, that one of the constraints on development is in fact the attitude of the absent migrant workers, who are never there to be consulted, but nevertheless sanction their wives and, often, their younger brothers very effectively against participating.

DR. ERSKINE.

At these meetings we do have a predominance of old men and women, of course. I thought, when we first tried to hold a meeting, that it would be the men who would be the dominant force as far as asking questions was concerned but we found in fact that many of the women got involved in asking very meaningful questions, and it certainly was not left to the men to take a lead in the issue.

QUESTION: How will the local people be involved in the precursor trials in your multi-facet rural development project ?

DR. ERSKINE.

The idea for the precursor trials is that they will serve as demonstrations for the larger project that we hope to introduce later on. Local people will be involved in these demonstration trials; for example, one group will get involved in having some dairy cattle and another group will get involved in producing lucerne under irrigation - all we are going to do is to provide the inputs for them to establish these demonstration units. If the local community see their own members involved in establishing these units, then I think it will have a spin-off effect which will act as a motivating force. This has happened in other underdeveloped areas of the world where this approach has been adopted.

PROFESSOR P. DE V. BOOYSEN.

Mr. Chairman: When the idea of a development studies activity at the University of Natal was first put to the University, it was a concept with which I had no difficulty in identifying. My own background involvement in Pasture Science (and I am very pleased to see Pasture Science also involved in the Programme today) and my background involvement in Farm Planning ensure this. Pasture Science is by definition an integration of studies of the soil, the plant, the atmosphere and the animals, so it is in a sense inter-disciplinary. Farm planning, in turn, further integrates with those four physical factors, sociological and economic factors which surround the agricultural enterprise. So, clearly then, I was receptive to the concept of an inter-disciplinary activity aimed at mobilizing the University resources in the integrative study of the social, economic and physical development of the Third World communities, be they urban, peri-urban or rural, which are part of our South African mosaic.

And so it was pleasing to me that I was in a position to add a few drops of oil here and there to ensure that the wheels kept turning (although there will be many of you who know that they turned very slowly) from the time of the germination of that idea, to the establishment of the seedling, if you will forgive those mixed metaphors. Perhaps, I should rather say then, add a few drops of water from germination of seedling to establishment. But it is indeed the firm establishment of this seedling which you are all about today. Now the growth and development of this seedling to a mature and productive plant will be a fascinating one to observe.

For this to happen however will require the concerted effort of many people from many disciplines and will require some skillful orchestration by the leader; and during this process of seedling establishment, to continue the analogy, it will certainly give me great pleasure to add not only just a few drops of water, but perhaps a few grains of fertilizer in the process as well so that the plant may grow well to maturity.

But I have the utmost confidence that we have all the ingredients and all the experience for success in this important venture. And the first vital ingredient is enthusiasm; the response to Professor Nattrass's invitation to participate in this workshop is evidence that we have this

in abundance. Today there are 21 experts who are included in the Programme, and there are more who volunteered a contribution, but just could not be accomodated on this occasion. These 21 come from 15 different departments in the University and from 7 different faculties. I think that is tremendous ! And then there is the conductor of the orchestra herself; we all have the utmost confidence in Professor Jill Nattrass to arrange a symphony of exceptional quality. I am sure that this occasion is the start of something really worthwhile.

I sense a new era in the making at the University of Natal, not only because of this occasion, but also in the light of other things that are happening at the present time, and may I say, none too soon. Now let me elaborate. There will of course be the exceptions to what I now say - but I believe it would not be an inaccurate generalisation to say that as we look back over time at our University, one sees a collection of academics, compartmentalised into discipline- based Departments, each too insular in attitude, concerned primarily with the furtherance of a single discipline and with a blinkered vision of the other disciplines around them and somewhat divorced from the community it should serve and, more particularly, remote from those Black communities, which we seem to regard as forming incidental Black spots in the rural and urban White landscape with which we were primarily concerned. Now that's a pretty harsh description of the University's record, and I am sure that I must repeat that there have, of course, always been the exceptions. Nevertheless, as a generalisation, I believe it to be true and as a truth, a serious indictment upon our academic community. Lest I seem to be too critical of others, let me take my own faculty as an example.

As I am no longer of that faculty, I am conscious that even in using this example I still run the risk of causing offence. Despite the influence of those who have always had an holistic attitude towards their work, such as Professor Scott, it was not until very recently that the Faculty of Agriculture saw its role as anything else than the service of and the furtherance of the highly sophisticated and advanced agriculture of the South African White community. Now, furtunately, those blinkers are slowly being removed by the influence of John Lea and Dave Bransby, (who are here) and others. But in that faculty, I believe there is much more to be done yet. A teaching unit in, let us call it, subsistence agriculture, we don't have yet. There is an inter-disciplinary unit called Agricultural Production, but still

aimed at White agriculture - should there not be an inter-disciplinary unit, and an approved curriculum, aimed at training in subsistence agriculture. And in this regard, Dave Bransby earlier said that I had disagreed with him on the establishment of a degree course at Zululand University. I think I do, because in fact what I would rather see is our faculty of Agriculture changing its emphasis so as to accomodate studies and teaching in Subsistence Agriculture, and therefore to cater for those in the Black community who have aspirations for a degree and simultaneously, what should be developed is a far more extensive system of technological training in Agriculture for Blacks and Whites to meet the urgent needs of our Third World communities.

There are many other areas where there is evidence of this awakening to the realities of the Third World islands in the First World matrix in which we find ourselves. Some of them are of longer standing than the one I mentioned - the agricultural one. And at the risk of offending by ommission, one thinks of entities such as the Economic Research Unit, the Centre for Applied Social Sciences, the Development Studies Research Group and a variety of Departmental activities over the years. One recognises that they have been there and have done valuable work. But it is pleasing to note that in recent years an ever-increasing concern with the all-important Black world around us, and an increasing awareness of the community rather than the discipline. Apart from the work of individuals, the creation of entities such as our Department of Community Health - unfortunately not represented here today - the Institute of Natural Resources and the Subsistence Agricultural Study Group and the initiation of activities such as Academic Support Services and Teacher Upgrade are all evidence of a new sense of responsibility.

These must all be nurtured, so that the activities grow and spread to other disciplines. But there is much more to be done than simply the nurturing of these activities already in evidence. A new institutional philosophy is to be developed which reflects that this is a University in Natal/Kwa Zulu, and that Natal/Kwa Zulu is part of a Black Third World mosaic in a highly developed and technological White matrix. And so the challenge is to recognise this situation in which we find ourselves and to meet the consequent responsibilities which it imposes while, nevertheless, maintaining the academic standards set by the international fraternity of universities to which we belong. And that's our challenge, which I think we should face more squarely.

The establishment of the Development Studies Unit in Durban was intended to play a part in this particular activity - to nurture and catalyse all the forces already moving and to mobilise all the latent expertise available amongst us by providing a focus for the research in development studies at the University. If my understanding of its aim is correct and, indeed, if it is to achieve its objective, it will not be another empire, it will not be a threat to any existing activity in this area, it will not detract from any existing activity. It is intended only to promote and complement and offer a service of co-ordination where this is desired. And so really then, one looks forward to a synergistic relationship amongst a variety of disciplines in co-operation toward a common goal. Happily, in this sphere of activity, there need be no competitive tensions between the two centres, or between any other two elements in the University. The importance of the common goal, and the complementary emphases of the sociological in Durban and the physical in Pietermaritzburg, set the stage for a complementary rather than a competitive association. It is essential that an atmosphere of close co-operation exists, not only between the two Centres, but also between all the participating Departments and individuals, and I am confident that the necessary goodwill, interest and enthusiasm exists amongst all of you to ensure the success of this major thrust in the area of Development Studies. And through this co-operative venture, our University will be that much greater.

DR. G. LENTA. ECONOMICS.

I am not going to discuss this morning any particular research programme, present, past or future. Instead, following the lead given by Professor Booysen, I shall discuss what I consider to be the role of the Development Studies Unit, not in the sense of emphasising the links between the University and the Unit, but rather the link between the Unit and the Development Researcher. In order to put in proper perspective the point I wish to make, I would like to discuss in a very informal way, what I see to be the problems facing the researcher and indicate how the Unit can assist individuals in pursuing their research interests. There are three main problems encountered in research work. Firstly, the quality and quantity of statistics; secondly, the quality of manpower; and thirdly, difficulties in liason between Government Departments and research workers.

Not much elaboration is needed on the first problem. All of us who have been involved in the fields of research are only too aware of how fustrating it is at times to be confronted by situations which cannot be explained because figures are not available. We are all aware of the apologies of writers, when acknowledging that figures are not available. "Because of the paucity of data it is difficult ..... etc". "Despite the shortage of definite evidence, it may be conjectured ....." and so on. I feel the purpose of records for the researcher is to permit planning for the future. Inaccuracies or breaks in the annual sequences, however, are serious drawbacks. The assessment of past policies, which is vital in determining future plans, cannot be undertaken without the statistics, which reflect accurately and continuously as many facets as possible of the situation in each year.

The second problem we often experience is the lack of trained manpower in assisting academics in carrying out research work. The researcher is often compelled to make use, for the collection of the data which he requires, of people with no training in the gathering of statistics. It follows that their methods of collection are frequently unsatisfactory and that they are unaware of the standards of accuracy required. There doesn't exist in this University, a system whereby easy access to trained field workers can be had. It is often much easier to find funds with which to carry out research than to spend the money on field workers, who are often not available. How many times havn't we said: "Well, I have three, four hundred rand which were given to me by such and such a body for this particular project, and unfortunately, I do not know how to spend the money, because I just cannot recruit the

right type of person to do the field work on my behalf".

The third difficulty I would like to refer to is the lack of liason with Officials. This, particularly in the past, has often been a serious problem for the researcher. A decade ago, there was undoubtedly a certain defensiveness in official attitudes, which partly arose from a sense that the information held by government departments was, in the field of development economics at least, of doubtful value and might, if published, expose them to hostile criticism. At the same time there existed a general suspicion of the good faith of non-government employed economists and a fear that the material given to them might be used for political purposes, with no intention other than that of embarassing the government. It is pleasant, however, to say that this hostility has largely disappeared in the last few years; the researcher has become a more familiar figure and the nature of his work has been better understood. Government officers have become increasingly co-operative, and in many cases, have shown themselves willing to recognise the extent to which independant research can serve the interests of the whole community.

I would like to illustrate the nature of the problems I have just discussed by giving you the example of a research experience of mine in the recent past. I wanted to find out why in Kwa Zulu, in spite of the fact that there seems to be inadequate arable land, a great proportion of this arable land is not cultivated in any one year. I approached the Department of Agriculture of the Kwa Zulu Government in an attempt to obtain from them the assistance of their Extension Officers for the purpose of carrying out field work in selected areas of Kwa Zulu. The co-operation given to me by the Director of the Agricultural Department was gratifying. Extension Officers were contacted, areas were selected, questionaires were drawn up and a couple of weeks later the questionaires were sent back to me. Some of the results, despite the undoubted will to assist of the Extension Officers, were disconcerting. In sub-ward X, for example, out of an estimated 234 families, 480 had arable plots. In sub-ward Y, only 47 families out of an estimate of 850, that is to say 5% of the total, had the use of arable land. In another instance, tabulation of data supplied by the field workers indicated that in a particular sub-ward, none of the families with arable plots had cultivated their land, and in another sub-ward 55% of families with arable plots had failed to cultivate them. I do not want to sound ungrateful for the assistance received; I simply want to use this example to indicate - and I will come back to this point at a later stage - that perhaps the Development Studies Unit has a role to play in this particular field.

Ladies and Gentlemen, keeping in mind the problems I have just indicated, I would like to touch briefly on the needs of the researcher. The first need, I believe, is for researchers to adopt a more critical approach to origins and collection methodology of data. Economists are often tempted to disguise conjecture as fact and to offer an arbitrary figure where no definite one is available. Certain figures filter into development literature, and often do not have a greater value than mere hypothesis. But they become dangerous as soon as they are mistaken for statistics, based on adequate research. How often havn't we come across the contention that, for example, 60% of the national income of the Homelands is spent outside the geographical boundaries of the Homelands themselves; or that 20% of earnings from migrant labourers are remitted to the families in the rural areas. The temptation, of course, is for an individual to use these figures and embody them in his research work uncritically. Whether he is convinced or not that these figures are really reliable is a different question; the point is that he uses them , perhaps compounding past mistakes, simply because the figures are available, and simply because he does not have the opportunity or the ability or the means of doing the necessary fieldwork.

The second need I would like to refer to is the commitment to economic realities that the researcher must have. The tendency for a researcher to allow his political prejudice to influence his findings is a dangerous one. It is always necessary to remind ourselves that the researcher's role is to uncover facts previously obscured, not to inspire others to implement policies to which he may feel emotionally committed.

And finally, the type of research that is needed must be one with implementable value. By that I mean - let's go out of this University - let's go into the field and find out what people really need - what the situation really is - instead of relying on probably doubtful statistics and past mistakes. We should adopt a micro approach to our research in development. There is a great need, in other words, of the kind of research based on evidence gathered on the spot, rather than derived from other literature or the standard set of available statistics.

And now, Ladies and Gentlemen, let's talk about the Unit. Given my problems, given my needs - what can the Unit do for me ? As far as I am concerned, the Unit must give me trained field workers. The lack of this kind of trained manpower is probably one of the greatest handicaps to research in development. I would strongly recommend to the University that, through the Unit, the

infra-structure should be created, whereby field workers are made available to academics interested in first-hand research.

In the future I should be able to go to the Unit, discuss my research needs, offer my three or four hundred rand and ask who is the best person for the job. In other words, I should no longer be compelled to look around for untrained field workers and settle for the second best, simply because a pool of skillful field workers does not exist.

And finally, I would like to suggest that the second most important role that the Unit should play in the immediate future, as far as I as a researcher am concerned, is to keep me in touch with research being done in this University, or in other Universities in the field of development. The kind of contact that we are having today is a very profitable one. I hope that it will continue in the future. The situation I envisage is one whereby, if I, for example, am conducting a piece of research work in the field of, say, land tenure, I should be able to approach the Unit and say: "Could you please put me in touch with other people interested in this field" , so that exchanges can be had at a profitable level.

In conclusion, I apologise for having stressed what some of you may regard to be secondary or ancillary roles of the Unit - but I do believe that if the services I have mentioned are going to be provided by the Unit, development research at this University will benefit enormously.

DR. LENTA IN ANSWER TO A QUESTION.

Earlier on, I gave the example of some field work conducted in Kwa Zulu, through the Demonstration Officers of the Kwa Zulu Government. As I mentioned, the results were poor, not because the Officers were not concerned with my work, but simply because they had never been trained to carry out surveys. On the other hand, Professor Schlemmer, through C.A.S.S., recommended to me a man, whom I employed to do exactly the same type of field work. The results were completely different - the returns were satisfactory, in spite of the fact that the man in question did not know any economics. The point I wish to make is that the field workers I have in mind do not need to have any special training in any particular discipline, rather training in sampling techniques, gathering of information, understanding of the need for reliability and diligence. The field worker should be able to tell me: "Don't ask that question, because you won't get an answer for these and those reasons". But I do see the possibility where field workers can serve me in the field of economics, can serve somebody else in the field of anthropology or in the field of sociology.

PROFESSOR SCHLEMMER IN COMMENT.

Well, I think that suggestion of Dr. Lenta's to have a core of field workers on tap could unleash an enormous potential in this University. It would improve the quality of our disertations in the field of Development Studies and Rural Research; it would, I think, lift our efforts up to a new order of acceptance. But, as Dr. Lenta, I'm sure, himself knows, it is easier said than done. In 1964, when I joined C.A.S.S., I had in mind enough continuity to have a resident core of field workers, and it is now 1982 and we still havn't got them because we do not have the infra-structure to keep the continuity going. Nevertheless, we must try. I certainly accept the point in general terms and I think Professor Nattrass does as well, because we have discussed it. Thank you for emphasizing it.

PROFESSOR NATTRASS IN COMMENT.

I think that it is a problem, because amongst other things, Dr. Lenta is talking about Social Surveys - there is clearly a need for a common base here - but whether when one gets into the Anthropological research on a basis of participation, you want a different sort of field worker and you clearly do in an agricultural situation - you want someone with scientific knowledge. So there is a limited role for a group of field workers. And the other problem is the one that Professor Schlemmer mentioned, and that is keeping them occupied. You either need 10 or you need none. And I don't know what one does to overcome this; whilst I would also love to have a core of field workers, I can see the practical difficulties. There is clearly a need, and if we think about it, we might be able to overcome the problems.

PROFESSOR SCHLEMMER IN COMMENT.

I think that one has to bear in mind that there won't be complete continuity of requests from different Departments and from the Department housing the field workers, with the result that you have to have bridging finance - that is finance to keep them busy during lulls, and I wouldn't imagine that it would be possible on under about R70 000 a year to have the kind of number that would be able to do jobs of substantial scope. Of course, some of that R70 000 could come from projects and I think that I agree with Dr. Lenta that a general core of field workers could serve quite a wide variety of disciplines. I can think of Geography, Psychology, Sociology, Economics, some Anthropology.

MR. D. BASCKIN. PSYCHOLOGY, DURBAN.

I am planning to conduct in the near future a self-survey of needs for Newlands East, and let me just read the first page of the proposal and then explain what I think it is going to achieve. Now Newlands East is (as you may or may not know) a sub-economic housing estate just outside Durban; it is a so-called Coloured Group Area, and most of its inhabitants have been displaced from their previous homes in and around Durban. Although new, in fact it is instant it is so new, the Township suffers severe economic and social dislocation and a recent confrontation (last year) with the Durban Council showed the extent of the disunity and the powerlessness of the people who live there. It is proposed then to conduct a self-survey of needs in Newlands East to meet these goals.

Firstly: to provide by infra-structure of the survey a fundamental level of organisation at grass roots level.

Point 2: to develop an Advice Bureau.

Point 3: by transferring survey expertise to the people, to provide them with a valuable tool for mobilisation and social action.

Point 4: to obtain empirical data in terms of the symbolic universe of the people who live there of the needs and presenting problems of the Township.

And 5: to finally implement a developmental programme that comes out of the survey.

Now those are fairly large goals, and I have a fair measure of confidence that we will be able to achieve them. But, why, you might ask, is one doing a thing like this ? Let's focus then on what happens when a community is displaced. One of the less disturbing reasons which is put forward for displacing a community is so-called "slum clearance". People, often poor people, are housed in conditions which are regarded as unhealthy and bad; new homes, which are regarded as healthy and good, are put up for them and are placed somewhere else and they are moved from their previous area to the new one. There is no doubt, in a manner of speaking, that the material environment is improved; there are lights, there's plumbing, there are roads - but there is no doubt whatsoever that the psychological destruction of the community is complete - complete and absolute - and can take years and years to be rebuilt.

There is a thing called the cultural of poverty, which I don't want to dwell on, because it has its romantic components, and I don't for one moment think that poverty is a romantic or desirable thing. But, the fact remains that in these so-called poorly housed areas, there are very tight and historic relations between persons; there are methods of sharing income; there are indications of, all in all, a tight psychological universe which binds people.

Displaced communities, no matter how marvellous the architecture, do not have these components and the way a psychologist might want to intervene to improve the quality of life is to devise a technique which attempts to create a universe, which attempts to recreate the destroyed - the emotional and personal and sociological - relationships that previously tied the people together.

Now that is a tall order - a very tall order indeed. And there have been various attempts by various programmes to do just this. How we hope to achieve it, is to do this.

The first thing we are going to do is to impose - and I know that sounds a little out of order in circumstances of these sort - we hope to impose a basic level of organisation on Newlands East. It's very difficult for people to deal with problems if everything is dealt with on an ad hoc or reactive basis. During the crisis with the Council last year, so-called leaders were thrown up, representative of nothing in particular, who attempted to deal with the Council on an ad hoc basis, and as a result were outmanoeuvred. Firstly then, it is quite clear that what is needed is a level of organisation, and by carrying out a survey, in which the people themselves do the research, one imposes a pattern of organisation on the area as a whole.

Why, you might ask, carry out a survey ? Since when did surveys enrich the symbolic universes of people or create good relationships and so on ? A survey, as I say, has two uses: firstly, to impose a level of organisation; and secondly, to transfer very valuable expertize. There is no doubt that survey expertize is in the mind of a common person both a mystery and something beyond his control. Social research is done by University people and not by fitters and turners and welders and unemployeds. However, there is no doubt that had the people concerned had a level of survey expertize, the confrontation with the Council might have gone a different way. Why ? Because they would have had access

to the data which was otherwise a mystery to them. So the self-survey of needs transfers survey expertize to the people and this does a great deal, I believe, in improving a person's self-esteem. Power comes in various forms. To misquote Mao Tse Tung, power comes from the print-out of a computer. If you have got the computer, you are winning.

At the end of this outline I mentioned to you, the purpose is to implement a programme that comes out of this survey. Surveys have been carried out in the past, with somewhat similar goals, in an effort to find out what the needs are, and that very often is where the intervention ends. University students, usually financed from overseas, rush in, do a great deal of research, find out exactly what the people need, and that's it.

We have got built into our financing for this programme then the sum of R15 000, which will be used by the people themselves to implement one of the needs that the survey turns out. So, not only will it transfer the expertize, a technique that must give people some power in their ability to negotiate with the Council and other such persons, but also a material transfer of funds will take place which will lead to some improvement in the quality of life in the Township as a whole.

I just want to conclude with one point about Township Planning. As I said there is a lot going on in this ten minutes! I don't know how many of you have been to Newlands East, but it is something else - it really is an appalling place. At the entrance to Newlands East there is a 110 year old Hindu Temple that was built by an architect who came out from India - the architect's name I can't think of at the moment - but this man was reputed not to be able to read nor to write, and he drew his plans for his temple in the sand and he told his builders how to put it up, and there is this 110 year old temple, which is absolutely beautiful, and right next door is Newlands East which looks like a series of cow-sheds. And this was designed by architects and economists and town planners - you can draw your own conclusions.

PROFESSOR B.G. BOADEN QUANTITY SURVEYING.

I certainly won't be taking up the whole ten minutes.
First of all, by way of backround, the field of Quantity Surveying traditionally doesn't have a research tradition. The last 10 years or so in the United Kingdom there has been a major change in this, in that a tremendous amount of research is being carried out - but the type of research I think is of no interest to the gathering today. In South Africa, traditionally again, Quantity Surveying teaching has occurred and has been in one direction only - the whole purpose of teaching in the Departments of Quantity Surveying in this country has bee to produce graduates who can handle themselves very well in a First World situation; in other words, they can manage a construction company or go into the Profession itself, and do very well. Now, that construction industry and those professions only concern themselves with what I'd call, rather loosely, First World or formal instruction. The reason for this is two-fold: first of all, there is a reluctance on the part of academics at University (in Quantity Surveying academics, that is) and the Profession as a whole to accept the fact that we are in fact living in a dual economy. Now, this reluctance is slowly working away, but at the moment it is very much there and this results in the teaching programme that occurs in most Departments.

Secondly, the reason for this First World emphasis is a total lack of understanding or knowledge on the part of the people you want to teach things about Third World matters, Third World issues, Third World problems. We are not equipped to teach this material - and the reason we are not equipped to teach it is that we don't have the knowledge through research, or through getting involved in community projects. So that is by way of background and is the situation that obtains in Quantity Surveying Departments in this country, and probably elsewhere. Incidentally, I took over the Department about 18 months ago, and I would hope to change the emphasis slightly to a more research orientated, rather than purely teaching, Department.

Secondly, the two projects which we have on the go at themoment, which are of some relevance to this gathering, are:

First of all: One called the Financial Planning and Control of the Provision of Urban Services by Local Authorities.

I don't know if that means anything to you. It's a study that has

been sponsored by the Natal Town and Regional Planning Commission, and all it involves is - coming up with a technique or methodology for putting down the financial consequences of physical plans. So the Planners have come up with very good plans, very often, but these havn't resulted in anything, havn't come to fruition, because nobody actually has looked at the financial side of it - there hasn't been a financial plan in parallel. It is very much a technical type of operation, and it will occur over the next two years and, hopefully, we will come up with a series of techniques or methodology.

The second project which is underway at the moment in the Department concerns low-income housing, and there, it is a question of the choice of technology and the economic impact that has on the local community. The underlying idea, you see, of this whole project is that traditionally, what happens is that a housing scheme or whatever for a place like Umlazi is evaluated solely on cost criteria - cost effectiveness. A scheme for 100 houses is put out to tender - 15 contractors tender - and the lowest tender usually wins, although it might be a tender for R10 000 000. The way in which that contractor intends going about building those 100 houses is of no concern. Minimum cost is the sole criterion. The second contractor might have come in at R12 000 000, but the technology that he uses, the process whereby he builds those houses, the materials that he uses to build those houses might result in spin-off multipliers to the local community, which wouldn't be evident in the R10 000 000 scheme. So I make a whole argument in favour of evaluating projects, not only on their minimum cost, but also in terms of the multiplier effects from that particular project.

So it recognises the idea that housing is not just a physical structure, but the vehicle for creating all sorts of all sorts of opportunities, physically in this case, economic in the employment sense and in an entrepreneurial sense; and I would hope at the end of this study to come up with a series of techniques which show how you can measure not only the cost of a particular project, but the multipliers of that project.

And thirdly, although not a research project, it is a research direction. In the Department, we are concerned once again with our lack of knowledge and in order to try and overcome this, we have concentrated on a particular problem, that of the small Black Builder, hundreds of which exist and which very few people know anything about. Now the idea of how to do this is to get a series of small Black builders together and to discuss what are

identified as some of the problems that these people have and just to identify how they operate; some of them are highly successful, some are not. And we would like to know how they operate and if there is in fact a need for our involvement in the whole operation. Only then, do I believe, can we start teaching something about the informal construction industry. At the moment our knowledge is nil.

Well, that's all we have Mr. Chairman.

PROFESSOR BOADEN IN ANSWER TO A COMMENT.

Mr. Chairman, if I could respond, it has always been a matter of some concern to me that we have all these disciplines in the University, which are defined according to a traditional name, very often. We should really be defining our disciplines in terms of problems, not in terms of traditional professions as such - and I think only then will you start getting at some of these problems.

I've been a bit harsh on the Quantity Surveying profession and it is probably true of the Architectural and Engineering professions, but very often their actions are dictated by a series of legislation. They have to, in fact, accept the lowest tender. The whole tendering procedure and all the documentation procedure in the construction field is aimed at First World sophisticated contractors, and certainly not at Third World, and these is really a need for a change towards a more appropriate series of techniques, etcetera.

DR. D. G. SLADE GEOGRAPHY, PIETERMARITZBURG.

Besides the Pietermaritzburg Geography Department's involvement with projects of the Institute of Natural Resources, such as the Maputo Land Study and the Rural Energy Programme, which has been outlined by Dr. Erskine, we are currently directing for the Natal Town and Regional Planning Commission a research project investigating informal housing along the Natal North Coast. The purpose of this study of the Black spot settlements in this region is to gain sufficient reliable information on their establishment, distribution and nature, so as to provide some point of departure towards formulating an enlightened policy on the treatment of the so-called informal settlement phenomenon which authorities now acknowledge they just cannot wish away.

Colour aerial photography was commissioned and used to establish the extent of the informal settlements and we are currently involved with field work surveys. The field work is aimed at assessment of both the physical site characteristics and a household survey and it is this stage which we are at now, having just initiated the questionnaire survey in the field.

Closer to home, we are involved with the Metropolitan Transport Planning Project of the Pietermaritzburg City Engineer's Department. (Professor Preston-Whyte has earlier referred to the importance of Transport routes in directing development). The Pietermaritzburg Metropolitan Transport study area includes not only the main Black residential Townships of Pietermaritzburg, but also the extensive black peri-urban areas of the South African Development Trust lands and Kwa Zulu. A behavioural study is planned to investigate utilization of the whole transportation infrastructure and a land-use study to establish the linkages between land usage and transportation requirements in the region. So again we are involved with data gathering and assessment for the purpose of establishing a co-ordinated land use strategy and planning policy in the defined Metropolitan area, which at present involves three authorities - Pietermaritzburg City, the Department of Co-operation and Development and Kwa Zulu.

And finally, two fields of research which are slotted in with the work being done by several colleagues on the Pietermaritzburg campus through our interdisciplinary research group called the Subsistence Agriculture Study Group. We have established a research area at Vulindlela in Kwa Zulu, just outside Pietermaritzburg and during the afternoon, my colleagues in this Study Group

will in their talks outline further the broad base of our combined investigation. But the two aspects which I am looking at in particular are water development in the area - at this stage specifically for domestic use - and secondly at housing.

A pilot survey has been completed of the local water resources available to households living in a small community within our research area called Ndeleshani. The twelve springs in use were identified, their water yield was measured, and the number of households using each spring was established. It was then possible to establish a supply-demand relationship for each spring

During 1981, the households dependant on five of these springs formed water development committees, collected money together and protected their springs. The protection involves building a concrete retaining wall with an outlet pipe, digging out the spring behind, filling it with chips for filtration, covering it over, grassing it and fencing the site. Continued monitoring of the water supply shows that the protected springs are free from faecal-contamination, while those unprotected springs in the area are grossly contaminated and are really unfit for human consumption. Unfortunately, spring protection has lengthened water collection time and there is critical demand pressure at some springs now. We are therefore not only encouraging the people to form water development committees to initiate this primary protection of the local spring water sources, but to simultaneously build small concrete reservoirs for storage of the spring flow during times when it is not being drawn off by them, particularly overnight.

The water resource study is being extended to the whole study area, and the introduction of some appropriate technological improvements is being investigated, such as dams and wind pumps and simple gravity reticulation systems. Continued monitoring of the supply-demand situation is really vital, so that we can pick up at an early stage any changes and tensions, which may develop in the water consumption and water utilization patterns in the communities. The danger is that where a limited water supply is developed and perhaps piped to individual households, some people may draw very much more water than they did when the water had to be collected and carried from the original source, and so social tensions could thus arise, and some people may have to go without. Each step, therefore, in the water development process needs continuous and very careful monitoring, which will in time, I hope, be carried out by the water development committees themselves, and possibly later also by school children as a school

scientific project relevant to their community.

Now, turning to the housing study, again a pilot survey has been completed in the Ndeleshani community and is now being extended to the rest of our area. Looking at the rate at which new buildings and the restoration of buildings is take place in Ndeleshani, for example, the number of new dwelling units has doubled in the short space of five years. Changes in house form are being investigated, as, for example, the trend towards building square-type rather than the traditional rondavel-type dwellings. Our attention is also being focussed on changes in the building materials being used, for example the increasing use of corrugated iron for roofing rather than thatch grass, despite the extra cost involved. The aim of this study is to establish the reasons for these changes which are occurring; to find the necessity, the motivation and the aspirations behind the changes and to identify stress points arising from the change of one variable without changing others.

For example, a reduction in the local availability of thatching grass for any of several reasons may force people to seek an alternate roofing material. A stress point is reached in the community where some families cannot afford the extra cost of the new material; or, on the other hand, a stress point is reached where the building technology is not suited to using this alternate material - modern manufactured material that they are not familiar with. The result is that dwellings are built which are structurally unsafe. These are the sort of inter-relationships being investigated.

In conclusion I hardly need to point out the important linkages between water availability and further settlement expansion, which has become critical in some areas particularly in peri-urban areas of Kwa Zulu, where increasing population influx is considerably boosting the natural population growth of these communities. During dry periods excessive competition for access to the limited natural water resource may cause considerable tensions in communities, particularly where there are many newly settled residents from outside areas. Both the water and the housing projects are therefore not only involved with physical aspects, but include the investigation of many inter-related socio-economic issues.

DR. J. J. MCCARTHY GEOGRAPHY, DURBAN.

I would just like to make my apologies for not being able to attend most of this morning's proceedings. I had three lectures and a prac. and should have a motto of O.G.I.F. (Oh God It's Friday) instead of T.G.I.F. Anyway, I would like briefly to describe projects in the Geography Department at Durban to you and to extend a little on the projects I have been involved in in particular. As a preface to that I would just like to agree very much with Professor Boaden's remark on problem orientated study. I personally find myself unhappy with disciplinary boundaries and more orientated towards a problem definition of the way in which the University should be structured. This, I think, is reflected in the kind of research the Geography Department does as well. (We seem to define Geography as an analysis of urban and regional problems and environmental problems as opposed to other definitions of the field.)

A brief run-down of some of the projects in progress, which are not mine. There is a project on wind-energy utilization which is being organised by Rosanne Dyab. This is basically on some of the technical aspects of possibilities for wind-energy utilization in South Africa. As many of you know, wind is a little discussed alternative to many other forms of energy - nuclear energy, coal-fired energy and so on. The main advantage, as I think you will also be aware, is that there is almost no pollution, and it seems also to be a renewable resource as opposed to the non-renewable resources that are available.

Gerry Garland is working on a soil-erosion study in the Drakensburg - again mainly on technical aspects, although not for their own sake, but rather within the context of a larger study funded by the Town and Regional Planning Commission to plan for problems of the depletion of the natural resources in Natal. And soil erosion, as I am sure you are aware, is one of the major resource depletion problems in highly populated areas - amongst those , of course, are the homelands, or the so-called homeland .

Then Di. Scott in the Department is co-ordinating a study of the Town Planning process in Natal with a view ultimately to modernising the Town Planning Ordinance, I believe. At this stage, it is fundamentally a research project into the actual planning process as it occurs in several of the Municipalities, and I believe the planners are to be congratulated for this. Being funded by the Town and Regional Planning Commission itself, it amounts to an investigation of one's own raison d'etre.

Now, my own research is largely into the area of conflict over urbanisation and urban development and it is this sphere which I'll elaborate on in a little more depth - obviously I'm more familiar with it than I am with other things happening in the Department. The immediate research background that I come from is this. There are two main projects that I have worked on in the past and which are now completed. One concerns the land sub-division, construction and urban development processes, both in South Africa and in the United States. The main methods of analysis here have been what we would refer to in Geography as the "ecological / quantitative approach", in that we use a simple method of dividing an area up, and then using quantitative techniques to look at associations between various observational units, - - - not such a popular method any more, but at that time it wasn't seen as that unpopular.

The ultimate objective here was to search for some sense of cause, or explanation, for the particular patterns of development that were occurring in the cities we were examining.

Then a second project which is now completed, and which I have come out of, which also explains where I am going, is one on community resistance to, and community re-action to development processes which were occurring in our cities. And in particular, the project I was concerned with was one in the United States. Here we adopted a largely behavioural/survey approach to the analysis of the reactions of local groups to urban development. We looked at involvement in community projects - projects aimed at either resisting undesired developments in urban areas, or promoting desired ones. The methodology here was largely using the sample survey procedure and the structured questionaire, and then performing various statistical tricks on the results - using something known as the Coleman method for the analysis of dichotomous variables. What this does is to identify partial and interactive effects between a whole array of variables of interest - "causal" or independent variables on the one side and some dependent variable (such as level of community involvement) on the other. In my view it is a very powerful technique and if anybody would be interested in communicating on these kind of techniques, I would be quite happy.

On a final point, I might add, my experiences have led me, as I have gone along, to start grounding my understanding of development processes in terms of a rapidly growing theoretical literature with a lot of intellectual roots in Marxism - particularly the Marxist theory of the political economy of urbanisation and urban development - and this will probably lead me shortly to excommunication from the Research Fund Establishment ! I just mention

that for those who are interested in communicating.

Now, with regard to current research, I have two projects in hand: one almost nearing completion, and the other beginning to take form. The one nearing completion is an H.S.R.C. sponsored project on the constructs that urban Blacks in the Eastern Cape hold with respect to their residential environment - not only their residential environment - but residential environments within South African cities as a whole. The appraoch was a sample survey of approximately 1000 people, using something known as Kelly's repertory grid technique; the idea here is that one tries to preserve the indigenous definitions of people in understanding variations from the urban environment. How is it, in fact, that urban Blacks identify variations in the quality of residential areas, and what is it that they identify as variations ? And then your next question is why.

The reason for using Kelly's repertory grid technique is simply that it offered a half-way house between the attractions of urban anthropology (of really trying to get outside one's own value systems to the extent that one is able, and allowing the others to define the basic parameters, or the basic constructs of something one is trying to understand, say the residential area); and my inclination for wanting to make statistically valid generalisations - it offers a half-way house between those two things. The motivation here was a Quality of Life Conference sponsored by the Urban Foundation in 1979 in Grahamstown, in which there was a great deal of debate and discussion on low-income housing problems as they affect Blacks, and alternative strategies to solving these problems. But I was unaware, was unable to find any study of the particular set of predispositions and constructs brought to bear upon these problems by the Blacks themselves. There had been some sort of ad hoc survey research which supplied people with the constructs - - - like 'how do you like big houses, or whatever else, big streets, trees in your gardens, and so on. In other words, defining in advance for these people what they should like. But there hadn't been anything which I regarded as methodically sophisticated. It sounds a bit arrogant, but there hadn't been anything which satisfied my methodicological criterion, so I decided to broach this particular topic.

The results are beginning to trickle in, although we are, at this stage, still pouring over computer print-outs and scratching our heads theoretically as to how to interpret the results. I might just say that what we can say so far is that we find that what Kelly calls "super-ordinate constructs" - - of those constructs which have a great range of implications for other con-

structs - are not the sort of things which I, quite honestly, coming out of my urban Geography and planning background, would have expected. They are not lot size, or sizes of houses or the nature of streets, or even the social variables and stuff like that pertaining to the community. The sense of alienation, the high crime level in the streets - these sorts of things which are being yielded in quality of life studies - not at all.

What are coming out are highly abstract political concepts - most of all relating to aspects of education, which I presume is seen as a vehicle into the few opportunities made available to Blacks in this country, and access to prospects in urban areas, defined as security of tenure. These two things, which I suppose one could see as being in the general realm of political deprivation, are coming up when practically all you say to them is "Can you tell me what is similar in that area and different in that area ?" (This is working through what is known as the implications by Kelly, and, the resistance to change grid).

The other project, which I am working on, is only just beginning to get off the ground and is financed by the Town and Regional Planning Commission. It is concerned with urbanisation and processes of change along the Coastal Strip in Natal from Richards Bay to Port Edward; and, most particularly, community attitudes to growth and change in the region, (where commonly it has been defined in the larger sense - - not only those who are currently using, but those who might, or perhaps should, use the Coast in the future: that is to say, to be more direct, we are not defining this as something confined to the Whites, but to the entire population.) At this point we are simply at the planning stage and so I'd very much welcome comments and suggestions especially on methodicological issues. My main problem is that I'm becoming unhappy with the repertory grid. I'm largely unhappy with it because it doesn't allow a sense of what might be. You are always asking, you're inferring from people's understanding of what is, so you ignore a new world, as it were, of possibilities as a basis for developing priorities. But I'd like something that straddles the two sorts of terrains that the repertory grid does and at the same time is more projective, as it were - concerned with possibilities as well as concerned with what is.

Finally, I might just mention that I am rather uneasy about all this research which is funded externally and implicitly defined by Government and quasi-Government bodies, because I think it circumscribes research in a very fundamental way - ways in which often are difficult to understand oneself. I know it makes a certain impact if we can get Research Fellows in our Department;

we all grow in size and number and look more and more powerful and publish more concentrated research, and for that reason we do tend to be dependant on this quasi-government funding, but I think that one has to look to possible dangers there, as well as utilizing the opportunities, and personally, I will probably move away from this external funding, if not by choice, then by default!

And finally, with regard to the Unit, I think that it is fair to say that all of us in Goegraphy in Durban very strongly approve of the formation of the Unit - we approve of the intentions in an educational sense, as we understand them so far, and we are actually very pleased about the options it offers us in terms of the training of post-graduate Students. We can't of course have much to say about the research, but to the extent we are able, we very much look forward to working with you and exchanging what we can.

PROFESSOR SCHLEMMER COMMENTING.

With your problem of trying to shift the people outside their framework of what is already known, you are running into an enormously challenging area. Perhaps we should think of running a little site workshop on this problem. We come up against this problem all the time - how to get people to project themselves outside the constraints of poverty, restricted mobility, and of an even more subtle constraint than these - one that they and we are not even aware of. But a lot of methodological development is needed.

PROFESSOR NATTRASS.

On of the things that might be quite nice to do in the way of encouraging the Universities to look at their own theoretical constructs only, is to take one subject and try a number of different theoretical approaches and see how well they relate to one another.

DR. W. LOENING PAEDIATRICS AND CHILD HEALTH.

Health can be defined as a state of complete physical, mental and social wellbeing and not merely the absense of disease and infirmity.

Although many vague generalisations are made when speaking of the health of the community, there are some hard and fast criteria which are internationally accepted as reliable standards for the assessment of health status. these are:

1. Mortality rates - notably infant mortality rate and life expectancy.
2. Morbidity and disease prevalence.
3. Socio-economic status.
4. Health care delivery.

Development in health care must be seen as an improvement in respect of these criteria. The first step in the development is thus to establish whether the necessary material is available for the abovementioned criteria and then secondly to fill the gaps where necessary. Before any development projects can be contemplated, the main problems must be identified, in other words a community diagnosis must be established.

1. Mortality Rates. As the statistics published by the Department of Health do not reflect the mortality rate of Africans in this country, we find a deficiency in this essential element of assessment of health care. The figures that are available from local authorities are unreliable, as a substantial number of infants, in particular, die without being notified. This is the case even in the urban townships, not to mention the remote rural areas. In order to fill some of these gaps, a morbidity/mortality survey was carried out in African communities - urban, peri-urban, near rural and distant rural. The following aspects were studied:
   Family structure and home facilities.
   Mothers' personal particulars - including education and attitudes.
   Children - total number for each mother; age, education, sickness, handicaps and if deceased: cause of death, age at death, and whether notified.

Some of the results indicated disturbing, though not unexpected, deficiencies in the health care.
Infant mortality rate : a mean of 96,8% (with a range of 53,5 - 134,1%).
Deaths not notified : 49,2% (with a range of 14,6 - 73,2%).

Wide-spread lack of potable water.
High prevalence of absent fathers.
Inverse relation of mother's education to infant mortality.
A similar survey was carried out in an isolated community just inland from Scottburgh. Here we looked at infant deaths in more detail as well as the maternal deaths. This was a base-line study preceeding the introduction of the training of traditional birth attendants. The results are very similar to those of the first-mentioned study, but, in addition, two maternal deaths were recorded of a total of 87.

2. Morbidity and Disease Prevalence Patterns are more difficult to determine by means of a field study. The most reliable figures at our disposal are those of hospital admissions to our unit at King Edward VIII Hospital. The commonest diseases by far fall into the two inter-related groups of malnutrition and infections. Diseases such as measles and tuberculosis are still responsible for much suffering. All of these are illnesses which have been virtually eliminated as cause of death from developed communities. Current research projects are determining the state of measles and poliomyelitis in the community with particular emphasis on the relationship to immunization.

In 1977 members of our staff carried out a survey of the nutritional state of the African child. This was of particular value as it showed a growth potential commensurate with that of Caucasions. However, as the mean weight and height curves were appreciably lower, it indicated an extensive degree of sub-clinical undernutrition. We were also involved in surveys in two Indian communities recently, which showed a similar, but probably a more severe, extent of malnutrition.

Thus far little work has been done on mental health. We do know that Benzine sniffing, (a form of drug dependance), is very prevalent in the 6 - 12 year olds - up to 42%. A community based survey of mental health of children is envisaged for this year.

3. The relevance of the Socio-economic Status of the community to health can best be illustrated by a diagram *, which highlights the importance of education and economic security. Although we are loath to trespass into the area of applied social science, most of our field studies include questions on the family income, as well as parent's education and occupation. You will recall that in our study 20% of the African mothers had no education, 21% had had up to 5 years education and 59% had more than 5 years education. It must be noted, however, that in the most deprived communities

* See end of paper.

that we saw, more than 70% of mothers had had no school education whatsoever. It came as no surprise that 35% of the mothers did not know what the family income was, 44% had an income of less than R180, and only 21% had an income of more than R180 per month. In an Indian community, 69% of families were found to be living below their household efficiency level.

4. Health Care Delivery is the one aspect which has given cause for much pride and back-patting in certain circles in this country. We have some excellent hospitals with very sophisticated technology and which provide expertise of international renown. However, that is health care at a secondary and tertiary level, where we try to patch up what has already been damaged - and often extensively so.

The most essential element is primary health care, which was defined by the WHO in 1978, when it met to focus on this particular area. Some of the essential features are :

1. It is based on methods and technology which are scientifically sound, socially acceptable and practical.
2. It is the main function of the country's health care system.
3. It is accessible to all individuals and families.
4. It engenders a spirit of self-reliance and self-determination.
5. It requires full community participation.

Thus, primary health care must be considered as the foundation and cornerstone of health care delivery. If one takes a close look at it in the developing sectors of our country, it is found to be sadly deficient in most of the aspects mentioned above.

It is in this area where we see an urgent need for development and co-operation. It is here where the other disciplines and sectors need to be involved. For instance, agriculture, food technology, industry, education, housing, public works, and communication, can all make valuable contributions.

Amongst others, the most urgent needs are:

1. Education - Basic compulsory education for all is an obvious need. However, it must be appropriate to the immediate needs of the community.
   Serious consideration must be given to the training of community health workers. This we cannot do in isolation, but need the help of anthropologists, educationalists, sociologists, etc.

In the developing communities in our country, there are vast numbers of children who receive little, if any, informal education which is so valuable in the development of the young child. We require appropriately trained child care workers who can assist child minders in the community, as well as in children's homes.

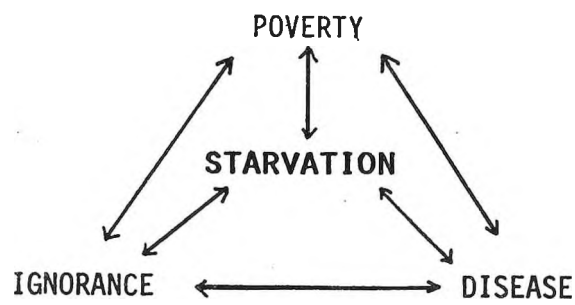
2. Primary Health Care - This must be made accessible, but more importantly, acceptable to the community as well as available to every family, no matter how remotely placed in our country. For this we require appropriate technology, not only as far as clinical care is concerned, but also in communication, water provision, and suitable equipment for health education.

3. Improved Social Work Services - One of the biggest deficiencies in our health care work is in the field of social work. Appropriate training and specialisation is an urgent need.

4. Data Collection and Dissemination - As indicated, there are big and very important gaps in the vital statistics. These need to be filled before we can build up a sound system; furthermore, the information is required to convince the authorities that they will never be able to supply the demands for secondary and tertiary care as long as primary health care is deficient.

Of all the major regions of the World, Africa has the record of having the worst infant mortality rate, as well as death in childhood. One out of every 5 children dies in the developing communities of our own country. The greatest challenge for development - as I see it - lies right here : to bring the mortality rates of the "have-nots" down to the level of the "haves". We have to face the sad fact that in our case the vital statistics do not emanate from different continents, but from 2 sectors of South Africa's people not separated by any geographical barriers.

* DIAGRAM.



QUESTION.

Is the high death rate - of infant mortality - not related to the high birth rate ? If family planning was practiced, would the infants born not stand a better chance of surviving ?

DR. LOENING.

In fact, we have shown in this study, and in others, that the number of children per mother is nowhere as high as is generally believed; in fact, it is somewhere in the region of 3,4 children per mother. The birth interval is nothing as shocking as is generally believed; in fact, it is generally round about 30 to 36 months, which, too, is quite acceptable.

As long as one out of five children die, you cannot expect a family to limit the number of their children. So one cannot divorce family planning from the general standard of living, and that has been shown throughout the world. When the standard of living rises, so the number of children drops - so one cannot take that as an isolated thing and say: "You must practise family planning, then you won't be in trouble." I think that first we must guarantee that the children will have a death rate - an infant mortality rate - that is acceptable anywhere, and then we can start talking about family planning.

PROFESSOR H.I. BEHRMANN. AGRICULTURAL ECONOMICS.

In 1975, the Kwa Zulu Department of Agriculture approached the Faculty of Agriculture and asked if we would do research for them. In the following year I went up to Ulundi, had a discussion with the people there and asked them "What do you think we could do in Agricultural Economics ?" They had a rather fatalistic view of things because they said that there was no development taking place. From my point of view I pointed out that we had no good statistics, for although there are periodical annual reports, the statistics are poor. One should be able to evaluate Kwa Zulu Agriculture better, so I said "Surely a proper census is a first priority ?" They accepted this, but, Mr. Alan Dicks, one of their senior men, suggested that we should start where there is already development, and he pointed to sugar production, where farmers were making progress, and earning good

incomes. By good fortune we had embarked on a study. One of our Masters' students, Richard Bates, was doing a socio-economic survey in the Ngoye district.

Bates had a sample of 123 farms and he did a study of four wards, or four different regions, concentrating on sugar-cane producers. Amongst the findings he discovered through multi-regression in his analysis of the marginal productivity of the resources that, on cropping land, the value marginal product was high, because they were short of land. The average size of farm was between two and five hectares, not enough to give a sufficient family income without augmenting it with wages. On the average only about 20% of their income was coming from farming. He found that an area of about 10 hectares was necessary to earn a family income from sugar-cane production. As regards labour, the marginal product is very low in relation to the opportunity cost of urban wages, thus indicating the under-employment of labour in Zululand.

A bag of fertilizer costing R7-00 had a value marginal product of R46-00, showing that rates of fertilization were low and helped explain why the yields were almost half of what white farmers achieved in that time. That is one study, one Master's thesis that has been completed.

Recently, we have had another candidate in the Department present his Master's thesis on a method of sampling for the collection of agricultural statistics. A census gets a lot of information, but, as Dr. Lenta pointed our, if the method of collection is faulty, errors are compounded and the error in the end result can be very great, and the statistics extremely unreliable.

This being the case, if you can sample the whole population and control the collection of data on a smaller scale, you can get more reliable statistics from which you can estimate the situation in the population as a whole, getting more accurate figures, but at a lower cost. Mr. Mike Lyne in the Department applied the technique of multi-lag sampling, which worked well, and this could be used in the future for the collection of statistics.

I might add that we agricultural economists, do, I think, owe a debt of gratitude to Dr. Simon Brand, who did a D. Sc. Agric. thesis at Pretoria University on the contributions of agriculture to economic development in South Africa, which highlighted the dualistic structure in South Africa, which he evaluated to show the lack of development in the Black areas, where there has been virtually no progress over time. He pointed out that

the greatest need for development in South Africa lay in the rural areas.

At present in our Department we have 16 Masters' candidates, of whom six are working on development, and two of these are socio-economic surveys; one in Northern Zululand near Hluhluwe, the second one in the Ndwedwe area where Mr. Leisegang is studying the effect of development in a rural economy. The Sukumani Development Corporation, for whom he has been working, had put capital into development there, and he has studied the reactions of the recipients of this help - how they feel about it and what their aspirations are. He has yet to come up with the final results.

One candidate is studying the effects of the foreign trade in agricultural products on rural development in Swaziland. Another project is on the cattle economy of Kwa Zulu, which is being done in the Institute of Natural Resources, by one of the candidates in our Department. A Ph.D. candidate is also working in this field.

A further study is on the marketing potential of agricultural produce in Kwa Zulu by a candidate who has been seconded to us by the Kwa Zulu Department of Agriculture, and who had been specializing in marketing for them. The sixth development thesis is in the field of policy, a study of agricultural policy in Lebowa by a Fort Hare graduate who is on the staff of the University of the North.

To round off, I would like to give what I see as a subjective evaluation of priorities in development research, although they are not entirely in Agricultural Economics. I would put development of people through education as having a high priority. After all, to learn to be practical farmers, you need a good measure of education.

The second is the development of good husbandry by the mastery of biological technology. Now, I do think that no farmer can be a successful farmer unless he is a good husbandman in that one has to care for the amimals, feed them properly, see that they are healthy. You must keep your cows healthy if you are a dairy farmer, otherwise you will not be able to make an income, so herd health is a sine qua non. The same with crops, for you have got to control weeds as well as disease, to use the right seeds, so without this biological technology that comes from agricultural training, there is not going to be much development.

Following on that, I would say, there is a necessity for credit. If people can produce a surplus from the land, they can be in a position to borrow

money and repay their loans, and thus start developing their agriculture. I would pair this with the development of infra-structure, such as better roads. Take, for example, the Financial Aid Fund of the Sugar Association which finances the growing of sugar-cane. The Kwa Zulu Department of Agriculture builds the roads, bridges, loading zones and does the contouring making a big investment that matches the money put in by the Sugar Association. The farm investment would not be successful without the infra-structure that goes with it.

Last of all, I would place land tenure. I must emphasize that I consider that land tenure is important. My own interest at the moment is in developing a land market and in the allocation of land. There is a lot of planning required, and the question is going to be whether a prospective farmer will be able to produce a surplus in order that he may earn an income to pay for the land. Even as a cash tenant, he has to be a good farmer, and until he is in a position to be able to pay, I don't think that he is entitled to own the land.

PROFESSOR SCHLEMMER.

Thank you very much, Professor Behrmann. I was interested in your priorities. I think that this is the kind of thing that should be debated at length ... perhaps not here because we havn't really got the time; people tend to start going for each other's throats on priorities. It was interesting to hear yours.

Professor T.J.D. Fair asked if better prices could be paid to farmers in less developed areas in order to encourage development. Professor Behrmann replied that prices could not be above prevailing market prices because buyers would turn their attention to the lower market prices. The question is largely a matter of distance from markets, or getting produce economically to markets. The price of maize to the farmer could be low because there is no proper way to get it to the market without incurring high transport costs.

PROFESSOR J.D. LEA. CROP SCIENCE. PIETERMARITZBURG.

Mr. Chairman, I think it is true to say that in the white community there is a very clear distinction between a farmer and a person working in the town. The farmer specializes in crop production and the average city dweller has very little direct involvement in food production. However, in the African community there exists a completely different situation. To illustrate this point, I would like to take the Sweetwaters/Vulindlela district near Pietermaritzburg as an example.

Now, I think that we must regard these areas as suburbs of Pietermaritzburg - virtually all the people living there work in Pietermaritzburg, and they are primarily wage-earners. * However, on the other hand, they all grow crops, and one can visit virtually any homestead, or any community there, and one finds that a wide range of crops is grown in the gardens - mostly beans, maize, pumpkins, potatoes and vegetables. So we have this combination of wage - earning and crop production. I think it is probable that the statistics for crop production in Kwa Zulu do not take home garden production into account, and I would anticipate that total food production from these gardens may be quite substantial.

I would like to try and define this type of cropping more clearly. It is often referred to as subsistence farming. I am not altogether convinced that this is a satisfactory term. More correctly, it is a supplementary type of farming where crops are grown to supplement wage-earning. An important aspect here is that even if a family has rights to arable land, the plots are too small for normal commercial farming. In certain places intensification is possible: there is one family in Vulindlela that grows flowers for the Pietermaritzburg market, but generally speaking, full-time commercial farming is not viable. One also notes that as the family wage-earning capacity increases (for example, when there is sufficient money to build a concrete block house) there is a tendency to reduce crop production. Thus, one may expect that if wages do increase in the urban centres, as one hopes they will, there may be a reduction in crop production because the families will then be less reliant on their crops. Thus an agronomist in Natal/Kwa Zulu is concerned with two distinct types of cropping system: (1) full-time crop production on the white farms, and (2) supplementary cropping in peri-urban and to a large extent, rural Kwa Zulu; and he must adapt his approach to these differences. In supplementary cropping the

* Socio-economic aspects of the Vulindlela community are given by Bromberger in Annual Reports of the Subsistence Agriculture Study Group.

urban element is strongly involved, and rural development is closely integrated with urban development. The main objective so far as crop production is concerned is to increase the quality and also the quantity of this supplementary crop production because, obviously, the more food a family can produce in their home gardens, the better their quality of life; i.e. better nutrition and more of their wages left over, as it were, for other requirements.

From our initial surveys and work at Vulindlela, it appears that there are a number of quite simple projects and extension programmes that can go a long way towards increasing the quality and quantity of food production in the gardens. There is time to mention just two of these.

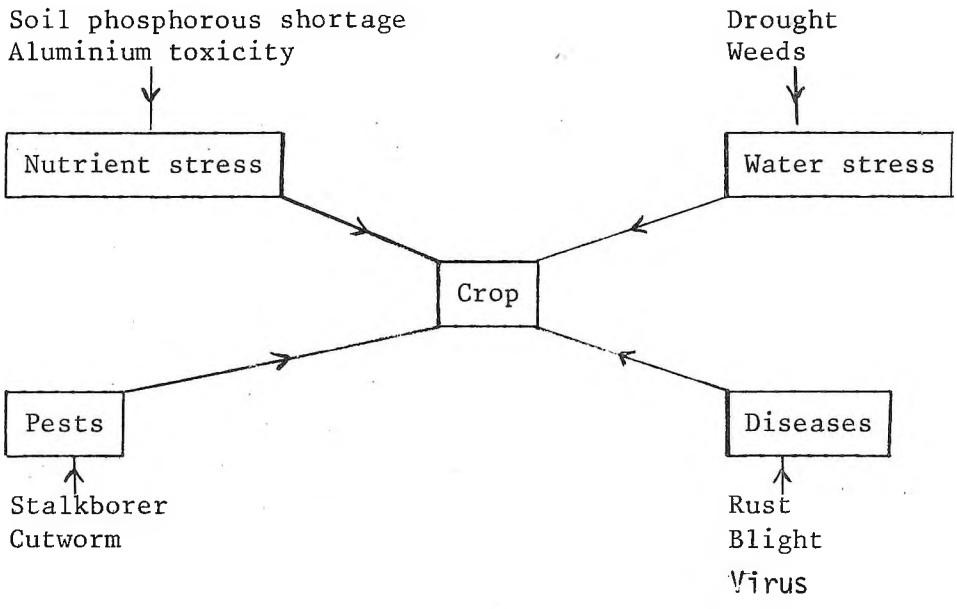
Surveys at Ndeleshane indicated that although there were fruit trees in the gardens, these were of very poor quality. Most of them had generated naturally from discarded pips. Trees derived from these seedlings normally mature late, and give low yields of poor quality fruit. In fact, there were virtually no grafted trees or improved fruit cultivars in the area.

Thus in this particular area, a useful initial input is the introduction of improved cultivars. There are a variety of fruit trees that are adapted to the area, which is suitable for fruit production. The one in which we are particularly interested is the mulberry, which is a prolific yielder and has a high vitamin C content. There are a number of other trees that do well, for example: peaches, citrus, avocados and plums. Our initial programme of introducing improved fruit trees has been received favourably by local residents, and efforts are being made to make the trees more readily available locally.

Another aspect of crop improvement relates to rust disease which infects most of the bean crops in the area. Cultivar trials comparing 25 new introductions have indicated that there is rust resistance in some of these genotypes. These have still to be checked for palatability and consumer acceptance, but the possibility of obtaining improved bean cultivars is quite promising.

Thus there are a number of relatively simple ways in which crop productivity can be increased. However, this will require strong and dedicated extension services in the field and we must become increasingly involved in training the necessary personnel.

Another aspect I wouldlike to mention is crop adaptation to environmental stress. Some of the factors involved are illustrated on this transparency.



The deleterious effects of drought on food production in rural and peri-urban Kwa Zulu are well known. It is a major problem in dry valley thorn-veld which constitutes about 41% of the land area of Kwa Zulu. Ecologically, and from the normal farm planning point of view, we would not think of growing crops in that region - we would regard it as a cattle rearing area and, of course, it is excellent country for beef production. Nevertheless, there are crops grown in the area, and one has to think of the possibilities of trying to find some crop that could be adapted to the very dry environment. As shown on the transparency, other stress factors in the crop environment include weeds, aluminium toxicity, deficiencies of soil phosphorous and pests and diseases.

Now over the last 3 decades when agronomists have come across a stress situation, they have developed a technology to eliminate it. For example, in the Natal Highland Sourveld there is an aluminium toxicity problem in the soil which can be overcome by applying up to 800 kg per ha of phosphatic fertilizer. I do not in any way want to underestimate the benefits that have been derived from this technology. In fact, if it has not been developed, there would be massive food shortages all over the world.

On the other hand, by adopting an approach of elimination, natural tolerance of cultivars to environmental stress may have been overlooked. Most of our cultivar testing has been done in high fertility environments with the emphasis on maximum yield rather than adaptation. It is possible that we

may have lost, or not been able to identify, cultivars with resistance to environmental stress. With increasing costs of inputs and energy, a new field of research to identify genetic stress tolerance is becoming established. This has application in both supplementary and commercial crop production. Current research in the Department of Crop Science includes studies on genetic tolerance to drought, aluminium toxicity, low soil phosphorous and diseases in soybean and dry beans. This is being investigated in controlled environments and in field trials. In the latter case a wide range of genotypes are compared under raingrown and irrigated conditions, and in the presence and absence of fertilizers. This provides a measure of their relative adaptability to stress conditions.

Finally, I want to mention very briefly the Subsistence Agriculture Study Group in Pietermaritzburg. This group is a sub-committee of the Board of the Faculty of Agriculture. It is one of several sub-committees which were formed to handle areas in which a multi- and inter-disciplinary approach is required. Disciplines represented in the Group include agriculture, economics, geography, social anthropology and historical and political studies. The main activities of the Group consist of: (1) surveys, research and development projects in the Vulindlela district near Pietermaritzburg, (2) organisation of short courses for extension staff of the Kwa Zulu Department of Agriculture and Forestry, (3) organisation of farmers' days for the Vulindlela community, (4) consultancy work in Kwa Zulu, and (5) provision of a course in rural development for undergraduate students and supervision of postgraduate research projects.

PROFESSOR SCHLEMMER.

I would like to ask a question that is technical. If one finds a cultivar that can grow with a lower level of phosphate in the soil, surely its nutritional value will suffer.

PROFESSOR LEA.

This is an important aspect. Yield and nutritional value of the grain will be monitored in the field trials. A slight reduction of % phosphorous in the grain could be more than compensated for by an increase in yield per unit area, thus increasing the total intake of food.

MS. FRANCIE LUND. CENTRE FOR APPLIED SOCIAL SCIENCES.

I feel as if I have been worked into a corner where the onus is on me to be brief and punchy - five o'clock coming up ! What has been interesting to me today - being particularly interested in the area of Community Development - has been how many Departments of the University have, over time, moved their focus and their orientation from, say, the 'First' to the 'Third' world, from rich to poor, in this country from white to black. In many of the presentations that were given, some catch-words were evident: we need to have more of a 'sense of community', we need to 'get the people to participate', people must learn to be 'self-reliant'. This, on the one hand, is encouraging.

My particular area of interest, however, is in how often we arn't able to do that. We have got the will, now, our management procedures are getting better, our wish to incorporate people in policy planning. But it seems to me that we are as yet quite unskilled in how to translate these new enlightened procedures into practice at ground level.

I want to give a very brief outline of a project I was involved in last year which indicates a role that one can get in to, which I seem to have got in to, with some small community groups - acting as an advisor to groups who are wanting to undertake research themselves. Dave Basckin spoke earlier on, most entertainingly, about the community self-survey that is planned for Newlands East. I have been involved in a self-survey undertaken in Lamontville, about the problems of unemployed young Black people, undertaken by unemployed young Black people.

They were working under the auspices of the Christian Community of Youth Trust. They faced two main problems. First, in what direction should the organisation go ? Second, the sponsors, Anglo American Chairman's Fund, who had given the Trust some money over some years, were sincerely, and, I think justifiably, questioning what was happening to the funds which had been put into this community group. The 'honeymoon period' of free and easy sponsorship of community development projects is over.

A self-survey follows all the logical steps of standard empirical enquiry. It differs in terms of (1) who identifies the problem to be investigated, (2) who structures the investigation - in

other words, who decides which questions people feel are acceptable to ask other community members, (3) who actually undertakes the research, and (4) the emphasis in the research on the process of training. Here, of course, there is an obvious overlap with community development principles such as participation, the transfer of skills, and self-reliance. This process points out for me some important implications for social research as a whole in our divided society, and also more generally in the field of development studies.

Ten unemployed young people were employed for three months. The first month was their training; in the second month they undertook 350 interviews, and during the third month they analysed the data. The training period emphasised the social problems of young unemployed people, the causes of these problems, administrative structures controlling Lamontville, availability of social services, the relationship between Lamontville and the broader society. Use was made of people within the University and outside to work with the group in answering these questions.

The group then devised their own interview schedule. Somewhere in here is the key to some of our problems with field workers, which speakers have alluded to today. In this process of the group sitting down and saying "O.K., we want to tackle unemployment, we want to find out what skills training courses people like us need - if we can identify that scientifically, the sponsor is promising something like R 25 000" - through working together, through identifying with this particular problem, you ensure no turnover rate among interviewers - you ensure that they feel comfortable with the questions they will have to ask strangers. They had certain clear ideas about what questions were acceptable: "you can't just go and ask another young person their age"; "you can't go out as a young person, and with another young person tackle the area of family income". So there grew the process of group identification, with each other and with the research. I would put my neck on a block that there was no cheating amongst the field workers, and I don't know how many social surveys one can say that for. Don't believe much of the stuff on the poverty datum line surveys coming out of Cape Town in '65, '66 and '67 - the data were cooked. I was one who cooked them! It was simply too embarrassing to be asking, as a young white person, of an older black person, how much margarine they mix with their butter, how much they spend on hats, how much was spent on alcohol. We <u>know</u> that problem areas in social research are

concealed expenditure on alcohol, concealed informal sector income, concealed illegitimacy rates, and I think where one puts trust in the people who are going to be asking the questions, if they identify the questions, and say how questions can be asked, it is important. One might then be more likely to start approximating the kind of objective truth which I suppose we are looking for in this academic enterprise.

The interviews took a month to complete. The group then did some simple hand tabulation of the data. A report was written to the sponsor on the basis of the results, particularly on the felt needs for skills training courses. The sponsor awarded a budget for setting up two training courses in Lamontville, and these are now underway. The main delay arose with the authorities in the area, who can't quite decide whether the mobile office which the group wants to use as a venue is a housing structure or not.

The implications for social research and development studies, as I see them, devolve particularly around what I call 'the realm of meaning'. What is the meaning of research to field workers ? What is the meaning of research to those who are interviewed ? We had a very low refusal rate on interviews eventually, after an initially high rate: local people were suspicious that the interviewers might be coming around to check up on their work or residents permits. But as word of the nature of the research spread, interviewers were asked to return to houses where they had first been turned down. Five of the outright refusals specifically stated objections to research per se: in the words of one of them "We have been the subjects of researchers too often before - we havn't seen what we are getting out of it."

I am not attempting to plead naively that all of our research should have results which can immediately be seen to be beneficial to the community. Gavin Maasdorp gave an example earlier on of how all the research that was done by architects (who have been much maligned today, by the way - they have done some jolly good work in the development field !) in the early seventies has finally begun to show fruition in some recent changes in government legislation. But this kind of survey, where there is a concrete goal in sight, does overcome the problem of raising people's expectations.

I think it has implications also for the training and servicing function of the University to non-university people. A problem, which I fully appreciate, is that it doesn't bring in money. This was a low-cost research project. A research institute such as C.A.S.S. always has a problem with finding funds, but one wonders whether one shouldn't be pushing for a budget specifically so that this role of the University could be extended.

And finally, I'm new to the University, but have picked up over the last year that there are a number of people who are involved in training in this informal capacity, whether it is Dr. Parker's training in Accounting procedures, whether it is Community Health programmes, or what not. I wonder whether it isn't time for us to start thinking about some kind of slightly more formal structure or platform where we can share what it is that we are doing, what resources have we got at our disposal, could we link up on some specific projects.

QUESTION. I have a methodological, technical problem. You mentioned some really good arguments for a self-survey, but - is one of the drawbacks - did the interviewers not have problems approaching people in their community because they thought they would be known, and would be reluctant to give information thinking it would be passed round the neighbourhood ? Is this more of a problem in self-surveys than in other surveys ?

ANSWER. That's a valid point. Two things: one is that when we were doing the training role-plays for how to introduce yourself to the interviewees, the interviewers came up spontaneously with "Hello, I'm so and so from Radebe Street." They identified themselves as coming from the area which was their choice - they didn't want anonymity. Second, the questions they asked were acceptable to them - they had devised them in terms of "Would I mind a stranger coming and asking me these questions ?" Here, perhaps, we couldn't generalise to a survey of a different nature. There were some general attitudinal questions, but most of it was concrete, more factual stuff. I think there might be a problem in a different sort of investigation, which didn't exist here.

QUESTION. What are the courses that are being planned ?

ANSWER. The needs were for skills training courses which would improve the capacity of the people in the area to earn money, and they turned out in fact to be two pretty obvious ones. One was for a type of clerical course in Lamontville, not in town. The other is for a dress-making /

craft group. The survey identified people who were already earning money to some extent, and who could improve their skills fairly rapidly. On the male side, the need was for carpentry, but the venue is still a problem. Interesting information emerged about the extent of the informal sector, and people were identified who can form a network of contacts to work with the Youth Trust.

MR. N. BROMBERGER. DEVELOPMENT STUDIES RESEARCH GROUP. PIETERMARITZBURG.

I have been very impressed with the way that a number of people have discussed profound questions at the same time as telling us about their research projects. I am not going to be able to do that at all. I think what I want to do, which may have some value, is to list a number of the things that I am involved with at present and have been involved with in the recent past, in the hope that there may be other people who may wish to plug in to my work, or to use the results, or make suggestions for its improvement. As time goes by, and we all continue to work, I hope, within the kind of framework that is beginning to emerge here today, such collaboration ought to be possible. To repeat, what I am going to say will be very much a listing of projects rather than an analysis of the results of projects.

Most of the work that I have done in the last year or two has been with my Subsistence Agriculture Study Group hat on, and in fact I would like to take this opportunity of paying tribute to that group of people. Had some of these agricultural scientists not got stuck in, in the way that they did in the Vulindlela District near Pietermaritzburg, I think I might still be wringing my hands and wanting to do survey work, but not really knowing how to get going. Let me tell you something of the work I have done as part of their team.

Vulindlela, outside Pietermaritzburg, which used to be called the Zwartkop Location, is in fact the oldest "reserve" in Natal. As such, it dates back to 1846, when it was listed as having a population of 8000. The preliminary results of the 1980 Census say the current population is about 100 000; so it has grown substantially in population - how its boundaries have changed, if at all, I do not yet know. As John Lea was telling us, there is a transition in Vulindlela as you move in from Elandskop, which is about 40 kilometres out on the Bulwer road, towards Pietermaritzburg it-

self. Put rather loosely, the character of things changes from rural to suburban. This has become clearer as the results of a fairly large survey that I did last year have begun to be analysed. In one of the sub-wards studied, which is about 25 kilometres from Pietermaritzburg, something like 30 to 40 per cent of the households have fields. In another sub-ward which is much closer to town only 11 households out of 608 claimed to have fields ! By that stage one is clearly no longer in an agricultural area at all. However, as Professor Lea stressed, and I think it is important to stress it, all households have gardens - even in the second of the sub-wards. Moreover, there is some evidence, but it is not yet as detailed and convincing as I would like, that the nearer you get to town the more intensively at least some people use their gardens, the more likely you are to find a few pigs kept, the more likely you are to have people buying day-old chicks and raising them for sale. You come across privately - funded water reticulation schemes - with some of the water going to vegetable gardens. In these senses then it looks as though despite (or because of) limited access to land, agricultural activities near town are more diversified and are becoming a little more intensive. Anyway - these few remarks will give you some idea of what sort of place Vulindlela is.

Those of you who came to our Symposium in Pietermaritzburg last year will know the sorts of questions that we have been asking, and I don't wish to run through all of that now. My own starting-point was a census-type socio-economic survey. I have by now completed this - my enumerators have covered 4450 households with something like 31 000 resident members.

We now know something about household structures; about the age, education, marital status, place of normal residence, economic status, place and type of employment, and money wages of household members; and about households' access to and use of fields and gardens, ownership of stock, in-migration, ownership of vehicles and implements, membership of stokvels and similar savings groups, infant mortality, source of water, and name of water spring used. This information is valuable in its own right, but it will also make sampling from the population so much easier when we want to probe certain issues more deeply.

It may be of interest to some of you that this sampling frame is available and that a fair amount is known about the population of households which constitutes the frame. It could be extended without too much difficulty. We have covered sections 2 and 3 of Nadi ward; section 1 would not take long, nor would Nxamalala ward. The other two wards, with a population of

about 50 000, would of course take longer to survey - but the job would not present and technical difficulties.

This year I have begun trying to make more detailed observations which enter more deeply into socio-economic like in Vulindlela. My first current project is an attempt to measure crop yields in gardens and fields. We spent a lot of time at the pilot stage in late 1980 and early 1981 asking people what they were doing with those fields and gardens of theirs, but, we ran into difficulties in getting reliable statements of how much people had produced. So what I am trying to do this year is to go over to direct measurement of crop production and area under cultivation. Right now I am working on potatoes, and then I hope to go on to maize and beans. I am providing people with standard-sized containers and engaging their co-operation in making measurements - particularly the volume of potatoes they lift. Where there is a harvest-day (as with beans) it will be easier for us to come along with scales and weigh the production ourselves.

I have at least two reasons for converning myself with yields in this way. First, there is the view that Merle Lipton has advanced that Black Cultivators almost certainly have higher yields than they are officially credited with. Behind this is the view that small-scale peasant cultivators can be, and often are, extremely productive - with higher yields per hectare than large-scale farmers. I remember Elize Moody saying some years ago that someone had claimed that in home-gardens in one area, Transkeian women had been able to get maize yields of over 30 bags a hectare, whereas the overall yield in the Transkei was reported as 2,5 bags per hectare for 1964 - 1974. What is the situation in Kwa Zulu ? Is small-scale African agriculture, given its material inputs, efficient at producing output ? Per hectare, how do its yields compare with those in large-scale agriculture ?

My second reason for interest in crop yields derives from my interest in incomes. What is the size of the "subsistence" component of real income that is being derived from gardens and fields in areas such as Vulindlela ? If we can't give fairly reliable figures for total family incomes in these circumstances, we havn't really got off the ground in our attempt to understand the decisions that are being made and the outcomes that are being observed - in labour force participation, stock-holding, land-use, fertility and mortality, general health and nutrition, school-going and much else. So part of the justification for this work in the light it will shed on the subsistence component of household incomes.

This also applies to the second investigation I am planning to undertake this year, which has to do with the micro-economics of cattle-keeping. Arguably, the pastoral resources of Africa - veld and animals - constitute its major economic problem, at least in rural areas. Raymond Crotty, who was here from Ireland recently, emphasized this point. Africa has slightly more than 25 per cent of the world's grasslands, but she produces only about 5 per cent of the world's beef and 2,5 per cent of the world's milk. And before our eyes the grassland pastures are being destroyed. So to study cattle-keeping in Vulindlela is to look both at a source of subsistence income and a major problem area.

Of course people have been talking about "the cattle problem" for a long time. Someone came up to me at lunch-time today and said : "People have been talking about cattle for 100 years and nothing seems to have changed." I'm afraid I don't know as much about the history of cattle in Zululand as I'd like to, but a quick survey suggests to me that talking about the problem hasn't involved the gathering of detailed and reliable statistics on a micro basis. My intended contribution then will be to make a study of cattle kept by a sample of 150 to 200 households in one area for a year - building up a detailed record of all benefits derived from the stock, all costs incurred, and hence what rates of return were obtained from the cattle. I intend to collect data on a monthly basis. Once the data-collection and the calculation of profitability have been completed, one will be better equipped to start trying to introduce some of the schemes for "company" ownership of the pastures (everyone has a share), grazing rentals, pasture improvement and so on, which Reynolds, Crotty and others have suggested. How much do you have to offer a man to forego the right to graze cattle free on the communal pastures ? Knowing what his current income from cattle is will at least give one somewhere to start.

My time is up - I shall just have to mention a few other projects. I plan a study on unemployment and labour force participation in Vulindlela. I have a full list of people in Nadi 2 and Nadi 3 who last year claimed to be unemployed. There were high rates of claimed unemployment. I want to go back to them and study their situations in much more detail - how they are affected by the labour bureaux system, how they search for work, whether they turn down jobs and why, how they survive being without wage-incomes, what alternative ways of making incomes there are in Vulindlela. And so on. Julian Hofmeyr tells me he is working on these sorts of issues down here along the coast, and he is already finding out all sorts of fascinating things. I hope that we can do the same in the Pietermaritzburg area.

As I said earlier, much of what I am doing builds towards a better picture of household incomes, and associated questions of poverty and inequality. So this year we shall go back to a sample of 450 or so households and work at establishing what incomes are from all possible sources. This will not of course be at all easy.

Beyond this work is planning. It seems that Vulindlela is now part of an industrial development point. Even if it were not, there would still be a host of pressing questions about the need for infra-structure in the area: roads, transport, water, sewerage, electricity (as population density grows); but the new "industrial" status makes these issues more urgent. Information is needed - we may be able to supply some of it. But what is the political / administrative system like in the area ? What of the separate jurisdictions which result from the Natal / Kwa Zulu division ? What of "tribal" institutions ? - what potential do they have for playing a useful role in a planning context ? Francis Antonie would like to work in this subject area next year if we can get the money and other requirements together.

And I've said nothing about the whole White-owned farming sector. Today, apart from some early references to projects in industry, we have not said much about "development" as labour absorption and training. I have been struggling for some time to launch a project on how technical change in Sugar-cane farming is affecting employment, and how decisions on such technical changes are determined. This year the major fieldwork will be completed.

PROFESSOR SCHLEMMER IN COMMENT.

One of the things that occurred to me again, while I was listening to you indicating how agriculture can become more intensive as you move closer to town, is the realization - with some horror - of what official planning may do to peri-urban areas once they move in there. There are indications that the officials are moving in to plan the informal peri-urban areas. There won't be any pigs in a planned area !

PROFESSOR JILL NATTRASS.

The Development Studies Unit is, of course, still very new, too new for me to have developed an overall philosophy regarding either the long term research programme of the Unit or the approaches to be used in achieving it.

Essentially, however, the Unit was set up to be a multi-disciplinary Unit and the research projects that we have managed to get off the ground this year reflect this goal. We have three projects in hand at present:

1. An assessment of the accessability of rural services in the Umzimkulu area of Transkei.
2. A study of rural poverty in the Natal/Kwa Zulu region.
3. An evaluation of alternative policy packages designed to encourage job creation.

The first of these studies is an attempt to evaluate the level of rural services in a small rural community in the Umzimkulu district. This project actually comprises three separate Master's projects all of whom will study the same problem, but from a different disciplinary perspective. The disciplines concerned this year are economics, socio-psychology and geography. Clearly this is a somewhat ad hoc approach, but the newness of the Unit coupled with an existing student demand made a more rational approach impossible.

In the future I would hope to plan the project thoroughly first, and then to slot the necessary disciplines into the plan. Perhaps the nature of the flow of Master's students will always make the attainment of the ideal impossible. However, one thing is certain; the fact that the three present projects are being undertaken together and are based largely on one field study will ensure that the participating post-graduate students will obtain first hand experience of working on a multi-disciplinary research team.

The second project that is being undertaken by the Unit this year is a study being done in co-operation with the South African Labour and Development Research Unit (SALDRU) of Cape Town University. SALDRU has a major nation wide study of Black poverty on the go and we have been contracted to develop poverty profiles for selected Black communities in

the Kwa Zulu/Natal region. We plan to survey in depth in four areas; a peri-urban border area, (the Black township near Mandini), a rural Black area, (Babanango), and two white farming districts, and we hope to be able to build up a picture of Black lifestyles in these areas. This study is planned for completion in September, 1983.

The third project, on job creation, is being financed by the Natal Town and Regional Planning Commission and is planned to be undertaken over two years starting in October, 1982. The objective of this study is to establish a framework within which projects can be evaluated in terms of their contribution to job creation. This is a difficult project, but one that I feel could yield immense benefits if it is successful and consequently must be tried. And I would welcome input - any input - in any of these projects from any one of you.

My own research interests that I have carried over from Economics, that I want to tell you about, are really related to firstly the relationship between economic growth and social and political change. I have an on-going project into the Spacial Distribution of Development in South Africa which is essentially based on data that I have got on computer, on the basis of magisterial districts for the whole pf the country. I have got something like 79 variables on the computer - some of them are computed variables and some of them simply published data - in other words, things like the G.D.P. for the magisterial districts, agricultural labour, agricultural output and so on and so forth. That data bank is accessible and is available to people in the University - in fact, it is being used by the Economic Research Unit in the study they are doing of regional development in Natal and Kwa Zulu. I am happy to make tapes available to anyone here; there would be a charge for the tapes, not a great deal, simply a contribution to cover the cost of establishment and those incurred to keep it going. If any of you are interested in using it, please come along and see me.

Finally, I have a very small project in the Transkei. I have been asked to evaluate their taxation problems. This is s short term, but hopefully useful, project; something I hope to complete in a couple of months.