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MAHAR MANGAHAS

Measurement of Poverty and Equity: Some ASEAN Social Indicators Experience

THE SOCIAL INDICATORS MOVEMENT

Development work on 'social indicators' has been going on in ASEAN (Association of South East Asian Nations) countries for nearly a decade. In any given country, there are a variety of institutions involved. In addition to the central statistical agency, there are other government offices which are primary sources of important social data. Some institutions are in the academic sector. Some institutions are private. Resident offices of international bodies, such as the World Bank and the various UN agencies, make significant research contributions.

Thus the social indicators movement is not (nor should it be) co-ordinated in the sense of being centrally managed or uniformly conducted. Each institution has its own terms of reference, its set of resources, and its peculiar vulnerabilities, and must pursue its work within its own special frame. The social indicators movement should be seen as the aggregate outcome of all these agencies' separate accomplishments, rather than as the work of any single specialized agency in particular. It is necessary to look at the entire system because one agency can do what another cannot, and vice-versa, and there is nothing immoral about it.

The essential spirit of the social indicators movement is its thrust towards quantification of the conditions of previously neglected, but admittedly important, social concerns. The measurement activities have been meagre because the policy emphasis on poverty and equity is still fairly recent; yet, at the same time, the policy emphasis is hampered because the data are so scarce.

The conclusions of this paper are directed not towards any one institution in particular, but towards the system as a whole. The coexistence, at times complementary, at other times competitive, of several disparate institutions generating social statistics is a favourable condition for the system to respond to. On the other hand, a high degree of centralization of authority over statistical activities is, in my view, an unfavourable condition.

POVERTY LINES AND GINI RATIOS

ASEAN data on poverty and inequality are still relatively scanty. Cross-sectional surveys of family income and/or expenditures are typically 4–5 years apart (Table 1). There has been little effort to keep the statistical designs of these surveys standard over time, and it is hazardous to draw time-trend conclusions. It is clear, nevertheless, that income inequality is relatively high, with the Gini ratio in the 0.40 to 0.50 region for almost all countries. Coupled with the relatively low levels of average income (except in Singapore), the inequalities imply that substantial numbers of the population are living in absolute poverty.

TABLE 1 *Gini concentration ratios of income inequality in ASEAN*

Country	Year	Gini (%)	Remarks
Indonesia	1976	52	Refers to per caput consumption expenditures;
	1976	39 (Urban Java)	
		30 (Rural Java)	
		34 (Urban outside Java)	
		32 (Rural outside Java)	
Thailand	1962	41	
	1968	43	
	1972	50	
Philippines	1961	45	1975 procedure not comparable to 1961–1971.
	1965	50	
	1971	49	
	1975	55	
Malaysia	1957	41	
	1967	44	
	1970	51	
	1973	48	
Singapore	1966	50 ^a , 46 ^b	^a Pertains to individuals, not to households. ^b Refers only to income from work.
	1972	44 ^a	
	1973	46 ^a , 42 ^b	
	1974	43 ^a	
	1975	45 ^a	

Sources: M. Mangahas (1979), S. Ishak (1979).

TABLE 2 *Comparative poverty lines in five countries (Values per Caput per Year)*

Country	Source	Year	Poverty Line in local currency (a)	US\$ exchange rate (b)	Poverty line in US\$ of country purchasing power (c) = (a) ÷ (b)	Kravis adjustment 'factor (1970) ^a (d)	Poverty line in US\$ of US purchasing power (e) = (c) x (d)	
Indonesia								
			<i>Java:</i>					
	Sajogye (1977)	1976	Rp. 38,400 rural	415	93	3.766	348	
			Rp. 57,600 urban	415	139	3.766	523	
<i>Outside Java:</i>								
			Rp. 40,000 rural	415	96	3.766	363	
			Rp. 60,000 urban	415	145	3.766	544	
	World Bank (Oct. 1978)	1976	Rp. 36,000	415	87	3.766	328	
Thailand	Meesook (1975)	1968/69	B 1,000	20	50	2.822	141	
	World Bank (Sept. 1978)	1975/76	B 1,800 rural	20	90	2.822	254	
			B 2,400 urban	20	120	2.822	339	
Philippines	Mangahas (1977)	1975	p 1,724 national	7.3	236	2.061	486	
	Mangahas (1981e)	1981	p 2,600 ^b Manila	7.9	329	2.061	678	
Korea	Suh (1979)	1978	W 130,236 rural	485	269	2.204	593	
		1978	W 155,160 urban	485	320	2.204	705	
Malaysia	SERGPU (1978)	1977	M\$ 579	2.4	241	2.540	612	

^aSource of Kravis factors: M. Ahluwalia, N. Carter and H. Chenery 'Growth and Poverty in Developing Countries', World Bank Staff Working Paper No. 309, December 1978, Table 3.

^b1,300 per month per family of 6; see Section 5 of this paper.

Table 2 summarizes absolute poverty lines selected from recent studies. Only the Malaysian line, it should be stressed, is an *official* one. For the sake of comparison, the poverty lines are first converted from local currency units to US dollars at the exchange rate applicable at the time, and then are given a rough adjustment for inter-country differences in the cost of living, using so-called 'Kravis factors' for which the base country of comparison is the US. Thus the final poverty lines in the rightmost column are in terms of purchasing power in the US in the base year 1970.²

It is remarkable that these poverty lines, after the Kravis adjustment, do not have an exceedingly wide range. At the head is Korea, with \$600-700, followed by Malaysia with about \$600, the Philippines with somewhat less than \$500,³ and then Indonesia in the neighbourhood of \$400. The World Bank lines for Indonesia and Thailand should be carefully interpreted, judging that the Bank tends to be highly conservative. Its 'deep poverty' lines of nearly \$300 for Thailand and about \$325 for Indonesia do not seem to indicate a norm for the margin of poverty too different from that suggested for the Philippines. Meesook has stated that her Thai poverty line, which may seem quite different from the general pattern, is also an 'extreme poverty' line; in addition, its reference period is more than half a decade earlier than the other cases, and thus an additional correction for price inflation would be warranted.

It is also interesting to note that the ASEAN poverty lines reported here are not very different from some recently done for Latin America by Selowsky (1979). His poverty lines range from \$215 to \$237, in terms of local prices. If we likewise apply 1970 Kravis adjustment factors, then the corresponding poverty lines in US purchasing power range from \$512 to \$539.

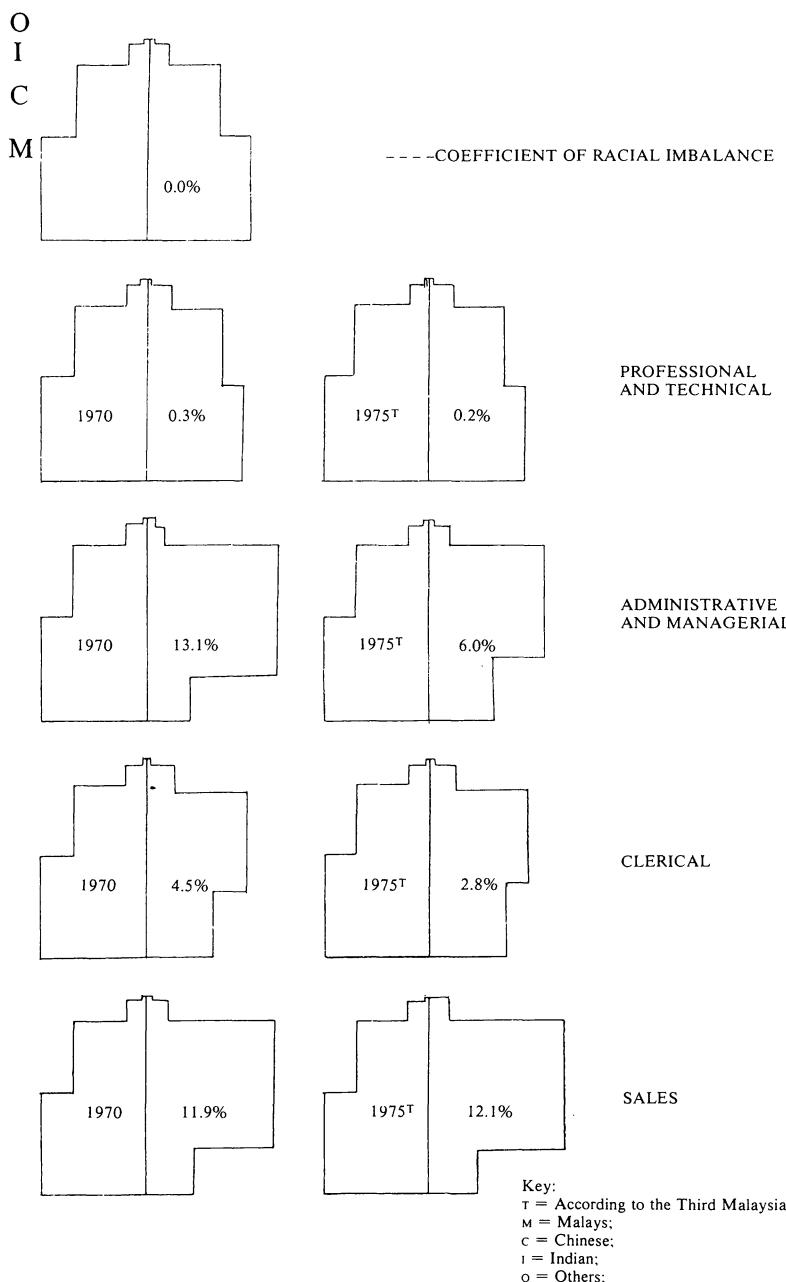
MALAYSIA: AN INDEX OF ETHNIC IMBALANCE

The concept of equity may be highly country-specific. This section describes an index recently introduced in Malaysia. It may be relevant to other societies which have similar problems of ethnic or tribal diversity.

One of the 'prongs' of the New Economic Policy in Malaysia is the restructuring of Malaysian society so that the identification of race with economic function and geographical location is reduced. Let e_k be the proportion of persons engaged in some specific economic function, such as entrepreneurship, who are of ethnic group k , and p_k be the proportion of group k in the population. If $e_k = p_k$ for all k , one could say that societal restructuring has been perfectly completed, and therefore ethnic imbalance is nil. On the other hand, one could specify entrepreneurship to be completely unstructured, when *all* the entrepreneurs come from only one ethnic group. Furthermore, the situation would be worse, the *smaller* the size of the ethnic group which monopolizes the entrepreneurship.

Now consider the expression $\Sigma (e_k - p_k)^2$ which obviously approaches zero as every e_k approaches p_k , in the ideal situation. Suppose that an ethnic

FIGURE 1 *Malaysia: racial imbalance in occupational access, 1970 and 1975 target*



group j monopolizes a certain economic function. Then, for k other than j , $e_k = 0$ and $\sum (e_k - p_k)^2 = \sum p_k^2$. It is supposed that $e_j = 1$. The worst possible monopoly happens when p_j tends to zero, or when $(e_j - p_j)^2$ tends to one. Thus, the highest possible value which $\sum (e_k - p_k)^2$ can reach is $1 + \sum p_k^2$. This suggests an *Index of Imbalance*, ranging from zero to one:

$$c = \frac{\sum (e_k - p_k)^2}{1 + \sum p_k^2}$$

By using the squares of the discrepancies, (a) large discrepancies are emphasized much more than in proportion to their size, and (b) any given gain or loss in entrepreneurial share of one race is more serious the larger is the original discrepancy of the race which experiences the offsetting loss or gain. These would seem to be desirable properties for the index.

The diagram of the index is meant to suggest a physical structure, for example, the profile of an office building. The total *height* is 100 per cent or 100 'stories', but there are two wings, the left pertaining to population and the right, say, to entrepreneurs. Each wing is divided into sections according to height, the left wing according to the ethnic division of the population and the right wing according to the ethnic division of entrepreneurs. The structure itself consists of a stack of boxes corresponding to the ethnic sections; each wing has its own stack, and each box is square, as wide as the section is tall.

TABLE 3 *Coefficients of racial imbalance in Malaysia^a*

Economic Issue	(Per cent deviation from perfect balance)			
	1970	1974	1975	1978
1 Unemployment	0.3	1.0	0.4	
2 Occupation				
Professional and technical	0.3	0.3	0.2	
Administrative and managerial	13.1	10.7	6.0	
Clerical	4.5	0.8	2.8	
Sales	11.9	10.3	12.1	
Agriculture	3.3	3.9	3.1	
Production	7.3	2.1	4.3	
Service and other	1.1	0.4	0.4	
3 Studies in colleges and universities	0.7	1.1	1.4	1.4
4 Ownership of share capital	42.0	31.2		26.7

Source: Government of Malaysia (1979), Table 3 'Restructuring of Society, 1970-1978', pp. 112-119.

Note ^aPeninsular Malaysia only, except in the case of corporate sector ownership.

As a diagrammatic convention, the ethnic groups should be ordered according to population, with the biggest group at the base, and the smallest at the top. Observing the left wing in particular, the more fractionalized the population, the more the building will look like a narrow high-rise, vulnerable to strong winds, earthquakes, and so on; and the less fractionalized, the more it will look squat, big-based and formidable.

In the ideal situation, the right wing would be perfectly symmetrical to the left wing (see the top of Figure 1). So when there is asymmetry, it is proper to say that the building needs to be 'restructured'. Since the sections of both wings must have the same ethnic order, the asymmetry can result in a bigger box stacked over a smaller one in the right wing.

Table 3 shows the application of the coefficient of racial imbalance to unemployment, occupation, access to local tertiary education, and ownership of share capital. In the first three cases, the population distribution by race which is used is that of the pertinent age/activity group. Figure 1 shows diagrammatically how occupational imbalance is to be reduced between 1970 and 1975, as per the Third Malaysia Plan. The greatest balance is clearly found among professional and technical workers (apparently this includes the civil service).

THE PHILIPPINES: THE SOCIAL WEATHER STATION EXPERIMENT

One means of filling in data gaps is a special survey devoted to social welfare or well-being. Malaysia has now undertaken three nationwide rounds of such a survey (Government of Malaysia, 1979). At the Development Academy of the Philippines, the Research for Development Department is conducting a Social Weather Station (SWS) Project by means of quick-response well-being surveys. As the name implies, the objective of the project is to produce a quick reading of the 'social weather'. Two surveys were done in 1981 and another is planned for 1982.

This section summarizes some results pertaining to poverty and equity from the first SWS Survey of 500 household heads in March-May 1981 (Mangahas, 1981).

The SWS project emphasizes disaggregation of the data according to *socio-economic status* or SES. There are two SES concepts, one using the respondent's own subjective rating as to whether he is 'Poor' (mahirap), the second using the rough-and-ready techniques of consumer research to group households into purchasing power classes based on external appearances of consumer assets, mainly the dwelling.

Under the self-rating scheme, the 'Not Poor', the 'Border Line' (of poverty), and the 'Poor' in Metro Manila are found to be of roughly equal size. Under the class rating scheme, about 9 per cent are found to be ABs or 'upper class', 32 are Cs or 'middle class', 34 are Ds or 'Lower class' and 25 per cent are Es or 'very low class'. Both classification schemes have their separate merits; the correlation between the two is high but not exact.

The *poverty threshold income* is an indicator which incorporates both the cost of living and the people's own conception of their basic needs. The median poverty threshold is about ₱1,300–1,500 per family per month, and the average is ₱1,920. There is strong agreement between the 'Poor' and the 'Non-Poor' concerning the location of the threshold. Both among the 'Poor' and among the 'Non-Poor', those with a higher educational attainment claim a higher threshold level.

The incidence of poverty has very little relationship to age of the household head, except for being somewhat larger for the very oldest. Poverty is clearly inversely related to schooling. It drops markedly when one has at least attended some college: a college diploma makes a small additional difference. There is a residual of self-rated poverty (about 5 per cent) even for those with postgraduate attainment. The 'Poor' have a higher rate of open *unemployment* (about 9 per cent) compared to the 'Non-Poor' (6½ to 7 per cent); the overall open unemployment in the household heads survey is 7½ per cent⁵.

The past year has been a difficult one in terms of material well-being. Those whose level of living deteriorated outnumber those whose level of living improved, 34% to 26%; for the others there was no change. The incidence of deterioration was higher among the 'Poor'.

Over the past three years, however, those whose lives improved outnumber those whose lives deteriorated, 42 per cent to 31 per cent. The incidence of improvement was much higher for the 'Non-Poor'; for the 'Poor', the ratio of gainers to losers over the past three years was only about 50:50. The class rating data suggest that it was in the middle class (Class C) in particular that the gainers had the biggest majority over the losers, over the past three years.

Over the next three years, those who expect their lives to improve highly outnumber those who expect a deterioration, 66 per cent to 13 per cent. This is out of those who could imagine the future, or only 80 per cent of the sample; non-responses were greatest among the 'Poor' (29%). In general, the degree of optimism about the future rises as material well-being already attained rises; but the peak of optimism seems to be reached, again, in the middle class.

The patterns of progress in well-being among households in Metro Manila are thus seen to be quite diverse. There are both ups (1978–1981) and downs (1980–1981). In some instances proportionately more benefits accrue to the poor, in some instances less, and in still other instances there is no pattern either pro- or anti-equity. Neither good news nor bad news dominates.

CONCLUSIONS AND RECOMMENDATIONS

Since the ASEAN region has experienced tremendous economic growth, but with little improvement in distributive equity, the past structure of development policies and programmes needs to be modified (Mangahas,

1979). But though the general principles of redistribution are well-known, the problem is to discover the optimal mix and the new institutional forms which will work in each country context. There is a need for a responsive and vigorous social indicators movement, prompting some institutions in the statistical system to collect the relevant data so that all concerned can be guided by the objective facts.

Monitoring of poverty

There is a clear consensus that the problem of poverty takes precedence over the problem of relative inequality. The following actions are recommended:

1. Adoption of one or more official poverty lines.

As a rule of thumb, there could be at least two lines set, say a poverty threshold and a subsistence threshold. We suggest the following as conservative, low-end guidelines:

Official poverty threshold: US \$300⁶ per caput per year

Official subsistence threshold: US \$150⁶ per caput per year

Adjustment can be made for different family sizes and for differences in the cost of living in various locations. Annual adjustments can be made for inflation.

2. Identification of target poverty groups to whom the programmes are to be directed.
3. Adoption of quantitative long-term targets for poverty eradication, together with corresponding short-term and annual targets.
4. Annual reporting of the incidence of poverty with at least as much fanfare as the estimate of the GNP.
5. Experimentation with innovative techniques for monitoring poverty

Monitoring of relative inequality

The following new actions would be recommended:

1. Quantitative integration of planning for economic growth, poverty eradication and relative inequality reduction;
2. Clearer official conceptualization of inequity;
3. Monitoring of the variables needed for an adequate representation of inequity.

In general, the above recommendations are concerned with an *operationalization* of a much-needed distributive thrust in the data-collection systems in the ASEAN countries. The data gathered should be oriented towards answering the questions: *Who* benefits? *Who* bears the costs? When the data slide over these essential questions, as when they are limited only to aggregates or averages, or, worse, when the topic is not even on the statistical agenda, then a very important function of data, namely conscientization, is lost. This is the important sense in which it is true that data are not really neutral, and is the main reason why the defenders of the socio-economic *status quo* are ever anxious to allege that there are 'insurmountable' technical, financial or even political problems with the development of data regarding distributive justice.

NOTES

¹The views expressed in this paper are the author's responsibility and do not necessarily reflect the official stands of DAP, UNICEF or any agency of the governments of Malaysia or Indonesia.

²To convert to base year 1980, it would not seem to unrealistic to *double* these figures.

³Except for the 1981 Manila estimate.

⁴This index was designed during the UNICEF-assisted Malaysian Social Indicators Project of 1977/78, see Government of Malaysia (1979).

⁵Another DAP survey found a much larger unemployment rate among non-household heads.

⁶These are so-called 'Kravis dollars', of purchasing power in the US as base country; for the base year 1970, see Table 1 for the Kravis conversion coefficients.

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DISCUSSION OPENING – SUNG-HOON KIM

Mahar Mangahas has made an excellent, extensive, in-depth survey of the ASEAN social indicators movement. In spite of the allegedly substantial

proportion of people suffering from absolute poverty not only in ASEAN countries but also in other developing countries, the task of monitoring poverty and relative inequality has not been able to successfully attract respective attention in planning for national economic development programmes; also even the scholars in these countries have paid relatively little attention to this important issue, while concentrating on the techniques of measuring such aggregates as national product and employment. In this respect, I think that *Mahar Mangahas'* recommendations concerning the monitoring task are legitimate and very timely. Most of my discussion will consist of adding some supplementary comments, rather than raising questions, to his paper.

My first comment is directed to the current debate between Sundrum (1976) and Sigit (1980-81) on the nature of the trend in income inequality, as introduced in *Mr Mangahas'* paper. It is interesting to note that Sigit in 1980 contended that 'it is not clear whether urban income inequality is definitely less than rural income inequality or even income inequality is growing or narrowing over time'.

In my opinion this contention should be viewed in the light of developmental stages in respective countries in order to arrive at a generally acceptable theory. When a country is at the stage where agriculture is dominant in the national economy, urban income inequality might appear to be less than its counterpart in rural sectors, simply because many poor or very poor people cannot find alternatives to remaining in the rural areas as simple farm-labourers and thus merely maintaining their subsistence livelihood there. But as industrialization *cum* urbanization proceeds as rapidly as seen in many developing countries, the poor and very poor including the destitute can more easily find alternative jobs in other than rural areas and they move to the urban industrial sectors. The rural-urban migration certainly transfers the rural poor to the urban sectors, but most of them still remain as naked-labourers. It is therefore natural to observe that the urban income inequality grows at a faster rate than that of rural sectors. At the same time, the overall relative inequality, too, is growing over time rather than narrowing, since government investments as well as other developmental programmes are more and more directed towards the urban/industrial sectors, causing relative poverty in rural sectors. Furthermore, rapid industrialization in developing countries is usually characterized by a handful of tycoon firms who take a lion's share of developmental profits. This fact implies that there are widening gaps not only between the urban and rural sectors but also between the 'haves' and the 'have-nots' in urban sectors. Within the rural areas themselves, there appears to be relatively narrowing inequality problems, as most of the rural poor find their way to rural-urban migration. These are the reasons why I believe the World Bank sees strong indications of increasing relative inequality but a narrowing one within rural areas in developing countries.

The second comment I want to make is that the social indicators movement should be able to identify factors underlining the very existence of the so-called vicious circle of poverty which has long been prevalent in

developing countries. Age, education level, number of family members and location, all of which are introduced by Mr Mangahas on page 157, are, in my opinion, less meaningful or even superficial ex-post explanatory variables to determine the real chain of poverty. The current taxation policy, as found in most developing countries, is an example that helps explain how a majority of people (that is poor people) finance, if not sacrifice themselves for, a handful of rich people through the overwhelming indirect tax system. Without exploring the so-called structural problems and the built-in poverty-driven policies, the social indicators movement may remain only as a scholastic gesture.

In this context, I would like to emphasize the need for a preceding thorough survey (study) of the real reasons of a poverty-chain, before I join the author in declaring 'the past structure of development policies and programmes needs to be modified'. It is certainly high time to pursue plans and programmes concurrently to reduce income inequalities on the one hand and to enhance the general level of economic growth on the other. Lastly, I believe that those who stand in the frontier lines of the social indicators movement, should be able to clearly answer the question as to whether pursuing the equity-orientated policies and programmes, which aim to reduce social poverty and inequality, is less costly than pursuing the current efficiency-orientated developmental programmes in order to achieve the respective nation's ultimate goal of up-grading the quality of its people's life. In order to answer this conflicting question, the positive or negative relationships between current economic policies/programmes and consequent poverty/inequality events in the process of political, social and economic development need to be carefully examined. Without this, there remains a danger that the social indicators movement is simply a scholastic contender. At the same time, social indicators studies may be needed to delineate what should be the ultimate goal of national development and how this goal might be achieved in both the short-term and long-term.

With all these comments, I would like to join the participants in congratulating Mahar Mangahas on his pioneering work in measurement of poverty and inequality in ASEAN countries.

GENERAL DISCUSSION*

The view was expressed that studies based on differences between groups missed the variability found within groups. This was important when comparing agricultural and industrial incomes as variability in the former was likely to be much greater.

It was felt that when considering 'social expenditure' it was important to distinguish between those social services that provide access to important 'public goods', such as education and health, and those measures which aim to redistribute current income flows, such as food subsidy programmes. The

*Papers by Bhalla and Leiseson and Mangahas.

former are likely to be more cost-effective.

Regarding income differences, it was stated that absolute as well as relative measures were important.

Participants in the discussion included Adolf Weber, S. Chiroapanda, Bruce Johnston, H. von Witzte and H.M.G. Herath.