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PRE-VOCATIONAL STUDIES —
A COMMENT ON RECENT
DEVELOPMENTS IN CEYLONESE
EDUCATION

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IN SRI LANKA

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PRE-VOCATIONAL STUDIES

R. P. DORE

A comment on recent developments in Ceylonese education

Dialogue No. 1

Scene: a well-known central school in rural Sri Lanka, well equipped, highly selective in admissions to Grade 9, but still succeeding in getting less than 6% of its Grade 10 children over the O-level hurdle into Grade 11, and a not much larger proportion of these who survive to Grade 12 into the university. When I visited them, a class of fifteen Grade 12 students were still awaiting results of the Arts A-level examination which they had sat five months before.

——— So, I'm told that many of you have studied economics. What would you say was the greatest problem of Sri Lanka's economy today?

——— Unemployment.

——— What do you think can be done about it?

——— It's the education system that's at fault.

——— In what way?

——— There should be more technical and vocational education.

——— Well, yes, but you know, don't you, that a number of people who've got J.T.O. certificates from Katubedde can't get jobs, and even some of last year's engineering graduates had a hard time getting the jobs they wanted. The fact is that the number of jobs isn't expanding fast enough to provide technical positions for more people than get them now.

—— Silence.

—— Do you mean that with technical education you would start up some business on your own?

—— Yes, that's it.

—— What kinds of things?

—— (Much discussion in Sinhalese of which the translated upshot was) Well, handlooms and cottage industries.

—— But surely you don't need technical education for that. Surely you could start that, if you wanted to, without special courses.

—— No, not unless the government provides subsidies and materials.

Slowly, the idea that the educational system is somehow to blame for the employment situation is gaining ground in Sri Lanka. But, blame in what way? The popular conception seems to be that the schools are to blame because they do not turn everyone into engineers and technicians. Since engineers seem not to have very great difficulty in finding jobs, if everyone was an engineer everyone would have a job – thus runs the popular syllogism. There seems not yet to be much general appreciation of the fact that even if economic growth were to accelerate there would still be only enough "jobs" for perhaps 15 – 20% of each age group entering the labour market. (And here I use "jobs" to mean what it seems to mean to Ceylonese youth – not "viable slots in the economy" as the Ministry of Planning and Employment means when it says that there are 110,000 new jobs being created every year, including in that number replacement for the older generation in farming and fishing, but only non-casual wage and salary employments, "modern sector jobs" with incremental scales protected by trade unions and Wages Board agreements (manual as well as white collar) of which the number annually becoming available is far less than 110,000).

What seems to be lacking in the popular consciousness, and even in the education profession except at the very top, is the idea that the schools do very little to prepare the large proportion

of each age group who cannot be found "jobs" in the sense just defined for the self-employed occupations which are all that the economy can offer them.

The Ministry's plans for reform

The Ministry of Education, by contrast, is basing its new educational strategy precisely on that realization. To quote a recent document: "It is widely felt that the highly 'academic' approach associated with present school curricula tends to alienate pupils from the realities of the employment situation.....They learn little about the productive possibilities of agriculture, horticulture and small-scale industries and partly for this reason seek white collar work." The new scheme of pre-vocational studies in Grades 6 to 9 – combined with a re-orientation of both general science teaching and social studies teaching – is intended to rectify this situation.

The scheme is in many respects imaginative; one can only applaud the energy with which it is being put into practice and the efforts to evoke local initiatives. But, if an outsider with little intimate knowledge of the situation may be allowed to offer his impressions from a brief visit – in the hope that *something* of what he says may provoke useful discussion – one wonders whether, in fact, the new scheme will be capable of producing the right answers. There seem to be two premises underlying the present strategy:

Premise A. The defect of the present curriculum is primarily *cognitive*. Children "learn little about the productive possibilities of agriculture, etc".

Premise B. If they did learn of these possibilities, children would come to *prefer* to be farmers or horticulturists or cottage industrialists to having conventional "jobs".

I would take leave to doubt both of these propositions, particularly the second. Over twenty years I have seen a transformation in the productive possibilities of Japanese agriculture and horticulture – enormous strides in rice technology, development of specialized commercial crops, agricultural prices rising all around. At the same time diminishing population pressure and industrialization have made more land available; television and

the urbanisation of the countryside have increased the amenities of rural life. There are many Japanese farming families enjoying a higher income, for fewer hours of work a year, than their factory-worker counterparts. And yet it is still the exceptional young Japanese boy who stays in farming, and of those who do, most are dutifully submitting to parents' wishes, very few actively *prefer* a rural self-employed existence to an urban wage or salary job.

It is hard to believe that the situation would be different in Sri Lanka even if the same rate of rural development were achieved (which in any case the demographic and technological constraints make very much more difficult.). The preference – not just for “white collar” jobs, but for any steady job, manual or non-manual – is likely to remain even if the process of levelling incomes is accelerated by a reduction in modern sector salaries as well as by rural development. Some successful farmers and rural craftsmen will doubtless earn much more than many white-collar workers, but the proportion who are earning *so* much more than their sons who will willingly succeed them as farmers or craftsmen is likely to remain small. For it is not just level of income that counts; a “job” offers security and regularity of income; it offers, more particularly if it is a white-collar job, a respected trouser-wearing place in society; it offers for a young man whose father is still many years from death or retirement, release from the personal subordination of the family circle into the greater freedom of the work place; the mere fact of getting a job confers some kind of kudos, for the employment question has become so preoccupying in rural Sri Lanka that the old traditional Veblenesque values have been reversed. “Conspicuous leisure” is no longer a symbol of high status; getting a job has become a symbol of success; not getting a job a symbol of personal failure. For all these reasons it seems to me unlikely that even those boys who are the sole heirs to some secure property-based form of self-employment of a traditional kind – the only sons of farmers with a viable acreage or of the owners of a retail business, or of craftsmen with an established clientele – are going to give up their preference for a “job”. Much less the others – now the great majority of rural boys – who have no such secure prospects in the traditional economy.

Premise B seems to me, therefore, unrealistic. A more plausible set of assumptions, I would suggest, are:

1. It will still remain the hope of the vast majority of rural children to make the transition from the traditional to the modern sector – to get a “job”.
2. Education will continue to be seen as the chief means of making the transition, and conversely,
3. Making the transition will be seen as the chief function of school, overwhelmingly the most important reason for going to school.
4. The best one can hope to do for the 70% – 80% of each age group – perhaps 40% – 50% of all those now reaching Grade 8 – who are inevitably going to be disappointed is to *reduce* their disappointment, to help them to accept the prospect of making a livelihood in the traditional sector as a viable second-best, rather than reject it as an unworthy submission to a fate equivalent to social death.

To summarise the point in spuriously quantitative terms: if, in the present scale of preferences of the average rural boy, an engineering job counts for 100 points, a high administrative job 95 points, a routine white collar job 80 points, a skilled manual job 70 points and traditional occupations 30 points, one cannot hope to raise traditional occupations from 30 to the 90 range, much less to 110, as Premise B seemed to suggest. But one can hope to raise it to 65 – to narrow the disappointment gap.

5. The second thing one can hope to do for them is to equip them with (a) the scientific and economic knowledge, and (b) the entrepreneurial achievement-oriented attitudes necessary for them to become more productive in these traditional occupations than their fathers were.

Knowledge Attitudes

This brings us to Premise A – the Ministry's assumption that the changes to be effected by the new curriculum are primarily cognitive changes – that the need is to provide the awareness of productive possibilities, the knowledge of *how* to make money. My guess is that the attitudinal change is just as, if not *more* important. A man who has the *will* to change, to innovate, to make money, will seek out and get the knowledge and skills he needs. The

knowledge and skills without the will are like a gasoline engine without gasoline; it produces nothing and gradually rusts away.

Stimulating entrepreneurial, achievement-oriented attitudes and canalizing them into traditional occupations is partly a matter of narrowing the disappointment gap; there is no greater inhibitor of enterprise than the sense of failure, the destruction of self-esteem.

One must start with diagnosis. The assumption of the argument which follows (an assumption which rests, admittedly, on intuitive guess work, more respectably known as sociological empathy: those who have studied the problem more carefully might have different views) is that there are two ways in which schools produce attitudes which inhibit the spirit of enterprise, both directly, and also indirectly by widening the disappointment gap. They are:

1. School education breeds an "employee orientation"; it trains people to become part, of, and to fit into, large organisations – schools, government departments, firms; to become passively receptive of instructions from their bosses as they have been passively receptive of the instruction of their teachers; to assume that all initiative should come from above rather than from themselves ("not unless the government provides subsidies....."); to be no more able to work on their own than the schools have encouraged them to *learn* on their own: to accept without question, and to allow their sense of self-esteem to be determined by, *external* measurements of their own performance (examinations set by Olympian examiners, qualification and promotion systems set by the organisation) rather than developing their own internal, self-reliant standards.
2. The second problem is the complete *disjunction* between school and home, a disjunction the more complete the more rural the child and the more illiterate his parents. (And, one might add, the more rural and illiterate the parents the more disastrous the consequences of that disjunction, since it is the children from rural homes with illiterate parents who are least likely to get modern sector jobs). Perhaps the best way to indicate the disjunction

is simply to list some contrasting adjectives which describe it and some contrasting symbols which serve to sharpen awareness of it.

School is	Home and village are
Modern	Old-fashioned
Scientific	Superstitious
Western	Traditional
Part of powerful officialdom	Powerless
Trousers	Sarong
The authority of the written word.	Mere verbal traditions
No talk of money, concerned with higher things.	Preoccupied with getting and spending.

Will the pre-vocational studies be able to bridge this disjunction, to bring school and home into contact, to make them relevant to each other? And will they do anything to reduce the employee orientation of pupils, to train people to take their own initiatives, to set their own standards to determine their own objectives?

PRE-VOCATIONAL STUDIES

Dialogue No. 2

Scene: a regional education office. A dedicated official who has acquired a considerable reputation for his imaginative promotion of pre-vocational studies is giving an example of how the course units are being developed. He places on the table a lampshade made of bamboo and cane – a basic cylinder with circular extended "eaves", professionally finished off with varnish.

— We look on pre-vocational studies more as a medium, not a subject – as a means of introducing the pupil to an integrated variety of aspects. It should be flexible and creative, but not the personal expression of interest of a particular teacher which would collapse if that teacher moved. It must be the product of a group of teachers who work together, and who can interpret and create something that can survive the removal of any particular teacher.

— You mean that it has to be formalised?

——— Well, let me give you an example of a unit of study built up around basketwork. Take this lampshade, for instance. Now to start with, here's bamboo. This gives an opportunity to teach the biology of the bamboo in relation to the plants of the same group. The same with the canes and grasses used.

Now we come to the making of these two rings which form the end of the cylinder. Children learn how to peel off a strip of bamboo. Here again physics and biology come in. The tissues flow one way, not the other. Why? Then we get the concept of springiness and flexibility. This can be bent, other materials would snap. What makes the difference?

And all the time we come back to making things. With variations on these basic rings, for instance, children can make steamers for string hoppers which have a good sale.

——— Will you bring in the local craftsmen to teach the children?

——— No, not actually into the classroom. You see, if you bring in the craftsmen, they will just want to teach the craft. They would inject all kinds of superstitions. No, it will have to be under the control of the teacher, though he would of course consult with and learn from the craftsman. But the aim is not to just transmit traditional crafts but to improve on them, and to train the children to seek ways of improving them, and the teacher has to do that. The teacher has to provide the scientific and intellectual element. For instance, the bamboo is bent into a circular ring. This involves more maths. What defines a perfect circle? Then the cylinder. The maths of the cylinder. The physics of balance – weight, consistency, uniformity, mass and so on. Then we come to adding this part like an upturned flower basket. First they learn about the geometrical forms involved; then there is opportunity to design their own forms and to combine different forms creatively in new ways.

Then there are opportunities for experimentation and research – what is the maximum candle-power of a bulb that could be used in this lampshade without burning it? How do the conventional currents flow? What difference does it make if you cover the cylinder with paper instead of leaving it open, and so on. In the

same way there can be experiments with different tools and methods of making the shade. Children can make their own tools.

Again, there are all the economic aspects; the marketing problems, the export opportunities, the economics of growing the cane, the possible uses for the parts of the plant not used in basketwork, and so on.

——— That seems to me very impressive and imaginative, but I wonder how far one can go starting from a relatively simple craft like basketwork. To fill out a curriculum over several years based on this craft one has to teach a great deal which has no direct relevance to the craft itself. Compare it say with teaching children enough about the mechanics of the tractor engine to be able to repair one. That could fill up several years of study without straying too far from the practical purpose in hand. If a school could get hold of an old worn-out tractor engine.....

——— No, no. That's impossible. They are not to be had. In any case we want to concentrate on the sources available in our natural environment.....

Here are illustrated, it seems to me many of the problems likely to arise in developing prevocational studies, and many of the reasons why one cannot be too optimistic about the prospects for changing attitudes. Pre-vocational studies turn out to be a new version of the old-style project work. They could well, if well taught, be intellectually stimulating, develop powers of observation, arouse curiosity, show the interconnectedness of knowledge. But they could also turn out to be a new kind of formalism. An elaborated pre-vocational unit centred around the craft of basketwork will contain three elements: (1) the knowledge and skills which existing craftsmen actually use, (b) the knowledge and skills which they *could* use to improve existing techniques, designs, marketing and use of resources, and (c) other knowledge and skills which are unlikely to have such practical relevance (the mathematics of the cylinder, etc.), but which are part of general education which the basketwork theme can be used to lead into.

As the curriculum is more elaborately developed the weight of the third element is likely to increase, and this process of "intellectualization" is likely to increase the disjunction between school and the environment and to reduce the chances of changing the existing "employee orientation" of schools.

The pressures which distort

There are compelling reasons why this should be so. At the end of the new Grade 9 there will be a general certificate of education. It is not to be a pass/fail type of examination like the present O-levels; each pupil will receive a Grade – A, B, C, D – in each subject according to his accomplishment. The decision has already been taken to make pre-vocational studies an examinable subject like any other, though it is intended that half of the marks will be awarded on the basis of performance in the school year and only half on the basis of the externally-set written exam. Overall performance in this general certificate will determine which children will be among the 10% who are to be selected to proceed to senior secondary education.

Given that the preference for modern sector “jobs” is likely to remain unchanged, given that admission to senior secondary will become a pre-requisite for the most desirable of those jobs, and even for the majority of all the jobs available, the attention and anxieties of children in Grade 9 are likely to be focussed on getting a high enough average mark in the general certificate to join the ranks of the favoured 10% – especially for the ablest thirty per cent, say, of children who are likely to see themselves as having a chance of “making it”. They will be the children who set the tone of the class, together with the teachers whose proper concern for the futures of their children will prompt them to concentrate their efforts on getting as many of *their* pupils as possible into the favoured 10%.

It is a realistic appreciation of this reality which has prompted the Ministry to decide to make pre-vocational studies an examinable subject. Otherwise, said one official, not ten per cent of our teachers would take it seriously. But that is not the end of the matter. Examinable subjects can acquire the reputation of being easy subjects or difficult subjects. In the present O-level exam there are subjects like Buddhist Civilisation with pass rates of 80%, and subjects like maths and English, which less than 10% pass. The bright child has no worries about doing well enough in the first type of subject: he is worried about the difficult subjects and on these he – and his teachers – concentrate attention. Those are the subjects taken really seriously; the Buddhist Civilisation periods are hours when one can safely let the attention wander.

There is no reason to suppose that the situation will be any different when the crucial selection barrier is the new general certificate. The difference between the boy with seven A's who gets into the favoured 10%, and the boy with 5 A's who does not, is likely to be their performance in difficult subjects like maths and English.

If pre-vocational studies become an “easy” subject, then, they may be taken more seriously than if they were not examined at all, but not *much* more seriously. There will be every reason for making it a difficult subject so that it *is* taken seriously. This will mean increasing the complexity of the mathematics and general science or economics hung on to the peg of the craft activity, increasing the number of facts to be memorised for reproduction in the examination, increasing, in short, the third, the general education elements, of the three elements listed above. And as this happens pre-vocational studies move further and further away from the craft activity which is their supposed focus; they become instrumentalised as another rung on the ladder into the favoured 10% elite; a means of escaping the necessity of ever having to practise the craft in earnest.

The dilemma: not to examine pre-vocational studies and risk their not being taken seriously, or examine them and see their whole purpose perverted, seems an inescapable one. There are historical precedents. Few people, perhaps, remember that when they were founded in 1941 the Central Schools had, as one of their three chief aims:

To correlate the education imparted to the needs of the locality: to prepare pupils for life and according to their ability and natural equipment; by creating a love for their village environment and by concentrating on occupations, traditional or otherwise, which could be developed nearer the pupil's home to counter as far as possible the tendency of village-lads to migrate to towns and semi-urban areas in search of employment and thereby to swell the ranks of the unemployed and to become useless to themselves and to the community.¹

1. J. E. Jayasuriya, *Education in Ceylon before and after Independence* 1969, page 98.

Within two years the aim was as good as abandoned. The schools were "unable to make children, most of all the good ones, interested in agriculture and handicrafts". These subjects became "the Cinderellas of the Central Schools..... overshadowed..... by the superior prestige of the pure Arts and sciences".²

To bring them out of the shadows by "intellectualising" them, by making them difficult, by making them approximate as closely as possible to the "pure" Arts and Sciences, is a cure if anything worse than the disease.

Drastic Solutions

The dilemma, I have suggested, is inescapable. Perhaps it would be more true to say that it is inescapable *as long as* the system of selecting pupils for higher education (and for desirable jobs) by achievement tests in the whole range of conventional school subjects persists. One of the main reasons why the ILO Mission recommended that it be abandoned in favour of aptitude test selection was precisely in order to give *relevant* vocational training a chance of being taken seriously, as well as to relieve the more conventional academic subjects of the backwash effects of examination pressures. Aptitude tests are not the only means of amending the achievement-test selection system. Alternatives are:

1. Achievement tests but with a school quota system which fixes for each school the percentage of each graduating class which may proceed to do higher education. The Ministry of Education is already contemplating regional quotas to enhance equality of opportunity. School quotas have the additional advantage of reducing the backwash effect since teachers no longer have any reason to be concerned with their own examination "success rate". And, in so far as selection becomes a matter of "internecine" competition, everyone has every motive for trying to de-emphasise its importance.

2. Selection by examinations at the end of special short courses in subjects outside the normal school curriculum, the examinations themselves could be conventional mini-achievement tests which do serve as adequate predictors of learning ability but

² *Ibid*

which shield the general curriculum from backwash effects by being concerned with the subject matter only of short one-week or two-week courses.

3. A combination of some kind of "threshold level" achievement tests with a lottery. It seems unlikely, for instance, that only 0.25% of each Ceylonese age group is capable of becoming a competent engineer or doctor. If achievement tests selected the brightest 2½% and the lucky one in ten were chosen by lot, it is doubtful if the quality of doctors and engineers would be much diminished. And it would have the advantage of reducing the intensity of competition and so backwash effects, while having the additional advantage of reducing the complacency of the favoured elite—they would no longer be quite so convinced that they "deserved" their success.

Intermediate solutions

These are, admittedly, somewhat shocking notions to those used to conventional systems. If, indeed, the abandonment or fundamental amendment of conventional achievement-test selection methods is too drastic a step to be contemplated, one might think of alternative forms of pre-vocational studies which might have a better chance of cutting through the inescapable dilemma. To take the example of basketwork again: one might cut the classroom teaching to the minimum of most relevant material (the first two parts of the three-fold division suggested above). For the rest of the time, for perhaps one-half day a week, the children, with their teacher, might go out of the school to work with local craftsmen actually making basketwork products for sale. Instead of an examination in pre-vocational studies it might be a qualifying precondition for selection for senior secondary that a pupil had made, in his Grade 9 year, products which fetched a certain given sum (fixed in the light of the resource possibilities in the area). Or, in the case of co-operative work, that the group product sold works out at this given sum per capital. The advantages of such a proposal are:

1. It reduces the disjunction between school and the environment; children would actually be working with craftsmen in a work environment.

2. The chances of a teacher bringing his intellectual skills to bear to improve techniques and designs would be much greater if he actually worked over an extended period with craftsmen than if he merely consulted with them over the preparation of teaching material.

3. The actual cognitive element in basketwork skill is small. An intellectual appreciation of how to make various products can be acquired in a few hours or days. Thereafter, acquiring a real work capacity is a matter of that slow increase in speed and accuracy which comes from practice. And only by experiencing this can children learn what real skill acquisition means.

4. The form of the proficiency test – production of Rs. X worth of goods – reveals in all its nakedness the inescapable fact that crafts are not only means of self-expression but also a means of securing a livelihood, of making money.

One has only to spell out this kind of alternative and to imagine the kind of resistance it is likely to meet, to become aware of the fact that the examination and selection pressures are not the *only* factor responsible for the tendency to “academize” and denaturise vocational subjects. That tendency is inherent also in some of the essential values of the school itself and of the teaching profession.

First there is a certain prudish “refinement”, a certain conception of gentlemanly behaviour, which seeks to avoid the mention of money or the acknowledgment that the desire to get it plays a large part in motivating human activity. Education is to be kept separate from the material money-making implications of what is taught: cultural and intellectual activities should not be sullied by the sordid business of money-making. This is apparent, too, in discussions in every country about the nature and purpose of selection examinations for further study. The emphasis in educational circles is always on selection as a means of sorting out those prepared for, and most able to benefit from, higher study. The fact, of salient importance to the pupils concerned, that the tests sort out those who will have the opportunity to earn Rs. 800 a month from those who will have to be content with Rs. 200, tends to be glossed over.

Secondly, intellectual activities are, in an absolute sense, more highly valued in the schools than manual activities. Teachers

have a feeling that there is something intrinsically more worthy in learning the properties of cylinders than in gaining manual dexterity in basket-making. This is reflected clearly in a defensive sentence in a Ministry document on the new pre-vocational studies: “It should not be supposed that the introduction of this new subject area will lead to any deterioration in the “quality” of the Junior Secondary Programme.” The fact that “quality” is put in quotes is a nice indication of the writer’s uncertainty, caught between conflicting values. For intellectuals to value intellectual over manual activity is natural, but if the schools really are going to emphasise the value and the dignity of manual labour, teachers will need consciously to suppress and subvert their natural tendencies, and perhaps one good way of doing it would be for them to engage in manual labour themselves.

Thirdly, arising perhaps from this uneasy co-existence of values is a tendency to romanticize manual labour of certain particular kinds. This may be what lay behind (*vide* Dialogue No. 2) the educational official’s sharp and total rejection of the idea of a pre-vocational unit built around tractor engines. Some kinds of manual work, like traditional crafts, close to nature (and of the kind which are taken up as leisure pursuits by middle-class ladies in rich societies), are more acceptable than other “mechanical” skills which have no virtue beyond their economic usefulness. There is something here of Wordsworth’s idealisation of the Cumberland shepherd, of the distant intellectualised romanticisation of the peasantry found in some forms of populism of the Russian Narodniki variety. It is a kind of romanticism which flourishes in the absence of any real contact with actual peasants.

Finally, the disjunction between school and home environment is not just an accidental product of circumstance, but the result of deliberate choice on the part of teachers. Recall, again, the educational official’s rejection of the notion of bringing craftsmen with their superstitions into the schools. Again, this is understandable. The school *is* an agent of change. The rational, scientific intellectual values which it promotes often *are* at variance with the more mystic, intuitive values of the folk society around it. But if the school is to be an agent of real change it must *engage with* that society, not operate in parallel with it, ignoring it, letting the children solve the compartmentalisation problem as best they may.

Somehow the school has got to come to terms with the craftsman's superstitions, recognise them as a fact that exists, ask how far they are justified, ask why he believes them. It is worth citing another example that comes to mind. Tentative plans for the social studies curriculum include an introduction to the stars and the solar system. But there is to be no mention of that essential part which the stars *actually play* in village life – as the basis of astrology and horoscopes. One sees and sympathises with the dilemma of curriculum builders. Deliberately to challenge these traditional beliefs, to declare them incompatible with rational science, might be to sharpen the disjunction between home and school (as well as arouse antagonism). Silence might seem preferable. But it is not impossible to find other more subtle approaches: on the one hand, to question the accuracy of horoscopes and perhaps to compare the methods of astrology with the methods of making weather forecasts; on the other hand, to point out the element of uncertainty and luck in all human affairs, to point out the human need for the security of certainty, and to point out various other forms of anxiety-allayment which that human need produces – including, for example, modern economic planning. The point is to show that improvements in intellectual sophistication and in real technological control over the environment do not alter the basic human constellation of needs and appetites, the basic pattern of capacities for love and hate, for hope and fear. It is at that level of basic humanity that the bridge must be built between home and school.

Back to selection again

These questions of the underlying values of teachers and educational administrators are difficult, but not intractable. If they are brought out into the open and widely discussed, it might be possible by a process of persuasion, of bringing contradictions out into the open and resolving them, to change in some measure existing attitudes and the patterns of thought and behaviour that go with them. Such a change would, perhaps, improve the chances of success for the new programme of pre-vocational studies, and improve the chances of schools doing something to narrow the disappointment gap, to lessen the employee orientation of schools and to bring them in closer touch with the environment. But the most intractable problem, the pressures which serve either to devalue the importance of pre-vocational studies or to intellectualise and academize them will still remain as long as achievement tests

are used for educational selection, and as long as, in a situation of increasing job scarcity, success or failure in those tests has such desperate importance for each child's future.

Some of these observations and suggestions may seem outlandish, some may be based on the outside observer's superficial misreading of the true state of affairs, but if only some of them have relevance and serve to provoke discussion of issues that tend to be overlooked, this paper will serve its purpose.

CREDIT SUPPORT FOR HIGH YIELDING VARIETIES IN SRI LANKA*

NEVILLE JAYAWEERA

My intention in this paper is a limited one. I want to examine the role of credit in the overall strategy for implementing the HYVV programme in Sri Lanka. This requires that we -

- (1) form an idea of the scale on which Sri Lanka's agricultural programme depends on the performance of the HYVV to achieve its goals;
- (2) examine to what extent the fulfilment of the HYVV programme is linked to the performance of credit;
- (3) consider the record of credit performance in the past and proposals for its utilization in the future; and
- (4) consider whether credit flows, together with the inputs they render possible, can alone secure for the HYVV their production targets, and whether it may not be necessary to effect deep-going and fundamental changes in tenurial relations if we are to both maximise the benefits and cope with the consequences of the HYVV.

I. The Scale of the HYVV Programme

The Five-Year Plan which came into operation in 1972 lays down as the immediate goal for paddy production the attainment of self-sufficiency by 1977. The fulfilment of this goal requires that output be raised from 77 M. bushels, which the Plan accepts as the performance in 1970, to 116 M. bushels by 1977¹ - i.e. a 65% increase in production over a period of 5 years.

* This article was written before July '73, when drastic corrective measures were taken, such as raising the guaranteed price for paddy to Rs. 25/- and liberalising credit, to rehabilitate the paddy production programme.

¹ *Five-Year Plan*, p. 38.

The paddy production figures for the sixties might seem to justify the expectation that the growth rates contemplated for paddy production under the Five-Year Plan are realizable. During the 61/65 period, paddy production picked up by 14% and during 66/70 by nearly 55%.² It might therefore seem that the task of realizing the new production targets would consist merely of maintaining the momentum already achieved with a slight increase in tempo.

While this is basically true, the production programme for 72/76 does involve a basic shift in strategy.

The 66/70 programme resorted to what may be described loosely as a "broad front strategy". The advance was more or less uniform along the entire front - credit was liberalised, fertiliser inputs were increased, new cultural practices were diffused, grass-root level institutions were activated, extension services were strengthened and new seed varieties popularised - all at a more or less uniform level of intensity. If it can be said that any one of these elements lagged behind, it was the new seed strains. Up to 1970 the main weight of the production drive was borne by the local seed H-4, which was introduced in the late fifties and which cannot strictly be classified among the HYVV. It was an improved variety though not an HYV. It was only in 1968 that an IRRI variety was first introduced into Ceylon. By 1970 only 65,000 acres, out of a total extent of 1.6 M. acres, had been brought under HYVV cultivation.

The 72/76 programme, however, unfolds a basic change in strategy. It is resorting to what may be described as the "single thrust strategy". Quite clearly, the main weight of the production drive is to be thrown on the genetic potential of high yielding seed strains.

In 1973, in the second year of the Plan period itself, the extent under HYVV is to be raised to something like 850,000 acres, out of a gross sown extent of 1.9 M. acres.³ It is expected to raise the

² *Statistical Pocketbook of Ceylon 1970*, p. 57.

³ Tables 1 and 5 of the Implementation Programme of the Ministry of Agriculture & Lands, 1973.

HYVV extent from the level of accounting for only 4% of the total sown extent to the level of being 45% of the sown extent. An idea of the magnitude of this operation can be had if we take a

TABLE I
EXTENT OF SPREAD OF NEW RICE VARIETIES⁴

Country	Year	HYV (acres)	Total (acres)	HYV as%
Sri Lanka	1969/70	65,100	1,620,000	4.0
India	"	10,800,000	93,119,000	11.6
Nepal	"	123,000	2,964,000	4.1
Pakistan	"	1,890,700	29,640,000	6.4
Burma	"	355,900	11,856,000	3.0
Indonesia	"	1,850,400	20,345,000	9.1
Laos	"	4,940	2,223,000	0.2
Malaysia (West)	"	316,000	1,272,000	24.8
Philippines	"	3,345,000	7,842,000	42.7
S. Vietnam	"	498,000	6,224,000	8.0

look at the table given above: Sri Lanka is seeking to propel itself to the front line among the Asian countries engaged in modernising their agriculture through HYVV.

At this point it might be useful to remind ourselves that the take-off into the HYVV phase may not have been possible without the intermediate technology manifested in the H series, built up during the sixties. The technological, extensional and institutional infrastructure for the HYVV had been built up laboriously around the H series in the sixties. The logistical supports for sustaining a massive HYVV offensive were already there. The point may even be made that the take-off into the HYVV phase will be relatively easy compared to the hard ascent from traditional and subsistence farming to the intermediate level of the H series achieved in the sixties.

Also, to describe this operation as a "single thrust strategy" is not intended to minimise the major advances that are planned for along the entire front, or to suggest that the reliance on HYVV is to the neglect of the other factors that constitute necessary elements of any agricultural drive. On the contrary, a basic overhaul of

⁴ *The Contradictions of the Green Revolution* by Harry M. Cleaver, Jr., Monthly Review.

credit institutions, procedures and ceilings; new grass-root level productivity institutions; a more sophisticated fertiliser strategy (mixed fertilisers adapted for different agro-climatic zones) and a fairly far-reaching transformation of tenurial relations; are all elements of the total package for transforming our agriculture and attaining self-sufficiency by 1976. Actually, it will be true to claim, in respect of any of these sectors, that the advances planned for the period 72/76 are more far-reaching than those achieved during the period 66/70. Still, they remain ancillary to the main thrust which is to be borne by the HYVV. The transformations in the other sectors remain supporting roles. The paddy production drive directed at the attainment of self-sufficiency by 1976 is conceptually and structurally integrated around the HYVV.

II. Dependence of HYVV on Credit

Before we consider the special claim the HYVV programme has on credit support, we may briefly call to mind the general role of credit in any paddy cultivation programme in Sri Lanka.

The case for credit for paddy cultivation in Sri Lanka rests principally on the following considerations:

(a) **The break-up of the traditional village.** The basis of paddy cultivation in the traditional Sinhala village was a closely interlocking system of rights and duties which depended for its working not on enforcement by officials, but on the vitality of the tradition, of which it was itself a manifestation. While individuals possessed lands in separate lots, they depended on one another for working them. Ralph Peiris gives us a comprehensive account of how this agro-socio-cultural organisation worked in his "Sinhalese Social Organisation".⁵ If money was the solvent of the medieval order in Europe, it was equally so of the feudal village in Sri Lanka. Services which had been rendered to one another on their paddy lots for centuries on the basis of a common tradition, were transformed into commodities to be bought and sold. The development of commercialism led to the growth of towns and the rise of a middle class. A class of absentee owners emerged who did not themselves have to render services in their villages in order to have their paddy fields worked. They could now buy the services

⁵ Ralph Peiris: *Sinhalese Social Organisation*, Part VII, Chapter 5, Sri Lanka University Press.

TABLE II
TOTAL NUMBER OF OWNERS OF PADDY LANDS ACCORDING TO TENURE AND SIZE OF HOLDINGS

Size Class in Acres	Owner Operators		Owners hiring labour		Owners giving on 'Ande'		Total	
	Number	No. in each size class as % of total No. of owners	Number	No. in each size class as % of total No. of owners	Number	No. in each size class as % of total No. of owners	Number	No. in each size class as % of total No. of owners
Less than ½	210,021	26.2	1,637	0.2	74,205	9.3	285,863	35.7
½ — 1	138,216	19.8	2,611	0.3	74,425	9.3	235,252	29.4
1 — 2	90,402	11.3	1,616	0.2	45,187	5.6	137,205	17.1
2 — 5	91,945	11.5	1,137	0.1	20,822	2.6	113,904	14.2
5 — 10	17,954	2.2	323	0.0	4,873	0.6	23,150	2.9
Over 10	3,259	0.4	153	0.0	1,994	0.3	5,406	0.7
Total	571,797	—	7,477	—	221,506	—	800,780	—

*On the basis of the share of the produce.

Source: Department of Agrarian Services.

required for working their farms. Kinship ties broke down. The performance of certain common services ceased to be voluntary. They had to be enforced by officials. Sanctions lost their force.

Gradually, money became essential for keeping the farms going. But invariably the cultivator's farm was small and his methods too primitive to yield the surpluses with which to procure the necessary services.

The search for credit became inevitable.

(b) **The size of holdings.** If the rise of commercialism dismembered the traditional village, the rapid increase of population fragmented the village holdings.⁶ A study of Table II (Page 22) will give a fair picture of the pattern of relationships that exists between holdings, operators and owners in paddy cultivation.

The average paddy holding in Sri Lanka is less than 2 acres. 65% of the operators work less than 1 acre, and 34% of the operators work less than ½ acre. Nearly 97% of the total number of operators work less than 5 acres. According to the Census of Agriculture, 1962,⁷ 33% of the total number of paddy holdings are under 2 acres and average less than 0.8 acre, and 41% of the paddy holdings are in the 2-5 acre group and average only 1.6 acres, which means that 74% of the total number of paddy farms are less than 1.6 acres.

Small-holdings devoted to mono-crop agriculture rarely yield surpluses. They generally entail primitive technology, low productivity, chronic indebtedness and abject poverty. Far from generating the surpluses required for absorbing new technology, they invariably fail to yield the working capital essential for keeping the farm going at subsistence level.

⁶ The widely-held hypothesis that land fragmentation in Sri Lanka is due to increasing population is not supported by a study undertaken recently by the Marga Institute - see *A Comparative Study of Population and Agricultural Change in Sri Lanka* - a Marga Institute Study - mimeo - to be published shortly.

⁷ *Practical Guidelines to Agricultural Development Policies in Ceylon* by T. Jogaratnam and Rainer Schickele - Table 12. Agricultural Economics Research Unit, University of Ceylon, Peradeniya, September 1970 - mimeo.

No statistics are available of supplementary sources of income for the operators and owners of paddy holdings, but we may safely assume that, given the kind of undiversified subsistence agriculture we have in Sri Lanka, whatever supplementary sources of income that exist cannot make any sizeable difference to the viability of the holding.

The fragmentation of paddy holdings is of great importance to the argument in this paper. The size of holdings determines to a great extent the imperfections of the factor market. A common characteristic of the smallholding farming sector of most Third World countries is that access to factors of production is unevenly distributed among groups of farm holders. As a result, factor markets are rendered highly imperfect and diverge considerably from social opportunity costs. A number of causes determine the divergence from social opportunity costs - immobility of resources, poor communications and governmental bias in favour of certain groups; but chief among them is the monopoly power possessed by a few prosperous members of the farming community. Where holdings are generally small, the few farmers who work the larger farms enjoy better access to the factors of agricultural production, and are better able to determine the costs of agricultural labour and tractor hire, the availability of credit and the interest rates on loans in the non-institutional sector. The resulting imperfections in factor prices tilt the factor market heavily against the small-holder.⁸

(c) **Chronic indebtedness.** The breakdown of the self-sustaining traditional village system, and the fragmentation of his holding, combine to hold the farmer captive within a vicious circle of low income and low productivity, and drive him into chronic indebtedness, which in turn further consolidates and deepens his poverty.

A glance at the Table, given opposite, should provide an idea of the subsistence needs of farmers operating holdings of less than 2 acres:

⁸ For a comprehensive economic analysis of the Green Revolution see "The Green Revolution", Keith Griffin, an UNRISD publication, 1972.

TABLE III ^b
MINIMUM GROSS INCOME PER FARM FAMILY REQUIRED
TO MEET BARE SUBSISTENCE NEEDS

Computed on the basis of the following data and assumptions:

1. Average yearly cereal requirement per person, in bus. of paddy per year†	10
2. Average size of farm family is 6 persons* Family requires, in terms of paddy harvested: bus. per year	60
At support price of Rs. 14 - Gross income from paddy: to meet the family's rice requirement	Rs. 840
3. Assuming two-thirds of the diet come from rice‡ and that the remainder must be purchased at twice the price of rice due to marketing, processing and transport cost and higher priced nutrient content of proteins and vitamins, makes for an income requirement for food other than rice:	Rs. 840
Total food cost per family	Rs. 1,680
4. Minimum requirement of income to pay for all production expenses (e.g. fertilizer, etc.) is assumed at the very modest rate of 30% of gross farm income	Rs. 720
5. The total minimum gross income per farm family required to meet subsistence needs:	Rs. 2,400
6. It can be assumed that farm families with gross incomes below this level are suffering from acute poverty.	
7. To meet bare subsistence needs, the farmer must produce a gross income equivalent to 170 bus. of paddy. With land yielding 85 bus. paddy per acre year this would require paddy land of ...	2 acres‡

See T. Jogaratnam and T. T. Poleman, Food in the Economy of Ceylon. *Cornell International Agricultural Development Bulletin* 11. Cornell University, Ithaca, New York, Oct. 1969, (Food Balance Sheet 1955-60). Based on 1964-66 average daily per capita consumption of 284 gm. rice and 65 gm. wheat flour, equals 349 gm. of cereals, which is equivalent to 9.6 bus. of paddy per year (45 lbs. bushel weight). Assuming a very modest unavoidable waste of 4% brings the annual per capita requirement up to 10 bus. At the low income level we are concerned with here, the cereal requirement can be expected to be met almost entirely from rice. For more detail, see also V. K. Wickremesinghe, "Reduction in the Ration of Rice in December 1966", *Central Bank of Ceylon Bulletin*; Oct. 1968, pp. 18-24.

* *Central Bank of Ceylon, Consumer Finances Survey*, 1963, p. 29.

† See Summary Report of the *Socio-Economic Survey of Nine Colonization Schemes in Ceylon, 1967-68*, Part I, Table II. Rajangana settlers produced 171 bus. of paddy from 2.2 acres of low-land, with a Yala acreage 90% of Maha, and Yala yield 120% of Maha, and an average Gross Farm Income of Rs. 2,400.

‡ "Practical Guidelines to Agricultural Development Policies in Ceylon", T. Jogaratnam and Rainer Schickele, p. 18.

Since Jogaratnam and Schickele formulated this assumed budget, by early 1973 costs of production consumed almost 70% of gross farm income. In the course of a survey conducted by Government Agents of several districts in the middle of 1972, for administrative purposes, it was revealed that in certain districts costs consumed as much as 80% of gross income: "We conclude that *all paddy farms under 2 acres* are under-sized farms not capable of supporting a family. These '*Non-viable Paddy Farms*' produce less than their family rice consumption needs. The income from their highland..... is far from sufficient to increase the family income to an adequate level. The only practical solution to lift these farmers out of poverty is to provide them with off-farm employment opportunities."¹⁰

In this situation the farmer is driven to debt. In order to meet his daily consumer requirements and to cope with the multitude of other demands that are made upon him, he has to resort to borrowing. He borrows invariably from non-institutional sources at usurious rates. The Survey of Rural Indebtedness conducted by the Central Bank in 1969 revealed that 54% of the rural households are in debt, and that 81.2% of the total rural debt is owing to non-institutional sources, while only 18.8% is owing to established institutions.¹¹ Actually, the burden of rural debt has been growing through the years. In 1950 only 30% of the rural households were in debt.¹²

The ultimate impact of non-institutional borrowing is wholly debilitating. True, non-institutional borrowing has its advantages.

¹⁰ *Ibid* p. 16. It must be noted that in this hypothetical farm budget Jogaratnam and Schickele have failed to take account of the free measure of rice given weekly to every non-income tax payer. This works out to 1½ bushels of paddy per person per year. The average yearly cereal requirement per person will then read 6½ bushels and not 10, and the average family of 6 persons will then require 39 bushels – say, 40 bushels – per year, and not 60, to meet their subsistence needs. The farmer will then have to produce a gross income equivalent to 115 bushels and not 170 bushels. To obtain this return on a two-acre holding the farmer will still have to produce 57½ bushels per acre. Even though this is considerably less than the minimum of 85 bushels given by Jogaratnam and Schickele it is still well beyond the current average yield of 46 bushels per acre.

¹¹ Tables 17 and 34 – *Report of the Survey of Rural Credit and Indebtedness*, 1969, Central Bank.

¹² *Rural Indebtedness*, Dr. W. M. Tillekeratne, Central Bank of Ceylon; p. 53.

It is flexible; it meets the needs of the farmer on a comprehensive basis as and when needs arise; it is much less cumbersome than institutional borrowing; does not call for collateral securities, and is operated solely on the basis of personal trust. Yet, its end result is to suppress productivity. It keeps the farmer from drowning, but does little else besides.

An adequate system of institutional credit, which will provide an increment of funds which the farmer can use for his working and intermediate capital, seems the only reasonable solution to this problem.

(d) **Primitive technology and low productivity.** The cumulative consequence of the factors enumerated above is to keep the farmer perpetually at subsistence level. It is not that the small farmer does not perceive the need for improvement or fails to recognize the opportunities afforded to him to improve, but that despite perceived opportunities, he lacks the financial means with which to respond to them.

To those who are familiar with the progress of paddy cultivation in Sri Lanka during the last 10 years, the inextricable way in which fertilizer inputs and production have been linked to credit, is well known. The following table should make this connection self-evident:

TABLE IV
CREDIT AND FERTILIZER INPUTS IN RELATION TO PRODUCTION

Year	Credit (Rs. M.)	Fertilizer ('000 tons)	Production (Million Bushels)
1960/61	11.5	20	43
1961/62	12.5	28	48
1962/63	10.6	38	49
1963/64	34.5	47	50
1964/65	27.5	60	36
1965/66	28.1	42	45
1966/67	32.3	40	54
1967/68	72.7	59	64
1968/69	55.7	84	65
1969/70	51.7	86	77
1970/71	29.0	85	66
1971/72	23.0	80	60
1972/73	26.0*	76*	58*

Source: Department of Agrarian Services.

*Source: Marga Research Unit

Generally, a spectacular increment in credit inputs has been accompanied by a visible increment in fertiliser inputs and production – as happened in 63/64 and 67/68. It is true that the gains in fertiliser inputs and production have not always borne a consistent ratio to the increment in credit within the same year. This has to be explained in terms of the inevitable time lag between the granting of credit and the effort necessary to resuscitate the farm for production. A diminution in credit is generally accompanied by an impairment of fertiliser inputs and a depression of production as happened between 60 and 63. The notable exceptions to this generalisation are in 64 and 71 – both of which are freak phenomena – the one has to be explained in terms of a catastrophic cyclone that swept through the paddy farms in December 1964 and the other in terms of a recourse to savings and reserves built up over the four years of surplus production that preceded it.

Carrying smallholding agriculture across the subsistence line calls for both intermediate and working capital and until such time as surpluses can be generated this is mainly a matter of an efficient and sustained credit effort.

We have stated the general case for credit. Is there a special case for credit support for HYVV? "Because the potential of high yielding seeds is realised only if they are used in effective combination with fertilisers, pesticides, well-prepared soil, adequate water and a greater skill in cultivation – a package of locally adapted inputs and services must be available for the rapid adoption of HYVV."¹³

What are the elements of this package?

An increasing penetration by extension services along with a sustained farmer-training programme, a broadening and strengthening of village-level institutions to enable a greater participation in production planning and implementation, a support price for paddy bearing a more realistic relation to the prevailing costs of production, and a large injection of effective co-ordination into

¹³ *High Yielding Varieties in the Strategy of Development*: Johnson and Couston – F. A. O. *Monthly Bulletin of Agriculture, Economics and Statistics*, Feb. 1970.

District management structures will be some of the essential elements of this package of inputs. Positive steps have already been taken to ensure some of these requirements. The Agricultural Productivity Centres, the raising of the guaranteed price by 75 per cent and the monopoly purchasing of paddy are important components of the support with which Sri Lanka expects to back her HYVV programme.

I have not mentioned the four most crucial elements in this package of inputs: (1) tractors, (ii) agro-chemicals, (iii) fertilisers, and (iv) credit.

(i) **Tractors.** No single factor has contributed so much towards increasing costs of paddy production as the increasing reliance on tractors, the shortage of foreign exchange with which to purchase them and the failure to keep stocks of spares replenished. During the period 60 to 65, 2,200 four-wheeled tractors were imported into the country; and during 66 to 70, another six thousand.¹⁴

The increasing emphasis on tractors led the farmer to release almost his entire buffalo holding for consumption. The Government, however, failed to maintain its own fair price tractor pools and the possession and the control of the use of the tractors passed increasingly into the hands of the affluent village farmers. When foreign exchange difficulties imposed severe restraints on the import of new machines and spare parts, the dominion of the affluent farmer over the subsistence farmer was strengthened. Owners of machines raised their charges by almost 100 per cent. The subsistence farmer cannot now return to the use of buffaloes. He is caught in the vice-like grip of the tractor-owning affluent farmer. In the package of essential inputs, tractors must therefore enjoy a predominant place. If the HYVV programme is to be implemented the subsistence farmer must first be liberated from his newly-acquired subservience to the monopoly of technology in the hands of the rich farmer.

I shall discuss later on in this paper the social implications of this dependence. At this point I only want to draw attention to the relevance of this development to the need for credit.

¹⁴ "Agriculture in Ceylon Until 1975" by P. Richards and E. Stoutjesdijk, an O. E. C. D. Publication, p. 146.

(ii) **Agro-Chemicals.** In other parts of the world, HYVV have shown themselves to be remarkably vulnerable to disease and attack by pests. Even though our own HYVV do not have for their parent stock any of the IRR varieties which have shown a susceptibility to disease, we cannot overlook altogether the proneness they must inevitably share with all hybrids. Considering this fact, one might expect the agriculturists to lay a special emphasis on the need for the extensive use of agro-chemicals. Past performance does not support this expectation. "When the gamut of support measures for rice production is considered, the encouragement given to the use of agro-chemicals for plant production is conspicuously weak. No subsidies are given for their use. Credit given for their purchase by the co-operatives amounted only to Rs. 500 thousand out of a total subsidy of over Rs. 70 million. The Ministry of Agriculture does spend some Rs. 500 thousand per annum on the eradication of large-scale outbreaks of pests and diseases, but does not undertake any widespread prophylactic measures."¹⁵ It is in recognition of the heightened need for the use of agrochemicals that the new Comprehensive Credit Scheme, which will be dealt with later on in this paper, allows almost 40 percent of the maximum credit to be granted per annum for HYVV for agro-chemicals alone.¹⁶

(iii) **Fertilisers.** It is not possible to separate and quantify that component of the increase or decrease in productivity that may be directly linked with fertiliser use, but from the two Tables V and VI we may safely conclude (a) that the most important current input, the use of which has increased, is fertilisers,¹⁷ and (b) that fertilisers consume the largest slice of the farmer's working capital.

These facts notwithstanding, fertiliser inputs, have, except in 1968 when the Extended Credit Scheme came into operation, always fallen short of the target by at least 35 per cent. The performance record of fertilisers, in terms of nutrients during the 65/70 period is as shown in Table VII.

¹⁵ *Ibid* p. 144.

¹⁶ "Proposed Loan Scheme for Paddy Cultivation - Comprehensive Credit Scheme", Ministry of Agriculture and Lands (mimeo).

¹⁷ "Agriculture in Ceylon Until 1975" Richards and Stoutjesdijk, p. 94.

TABLE V
INPUTS IN PADDY PRODUCTION

	1960	1961	1962	1963	1964	1965	1966	1967
Prepared land, '000 acres; major schemes	325	340	338	362	366	381	402	401
Minor irrigation schemes	338	344	351	364	370	377	388	385
Rainfed land	497	496	508	504	513	515	533	545
Total prepared land ¹	1,160	1,180	1,197	1,230	1,249	1,273	1,325	1,331
Fertiliser use, nutrient tons (thousands)	5.5	7.5	10.1	12.1	15.7	11.2	12.2	15.2
Acres transplanted (thousands)	64.9	72.5	81.0	99.7	93.4	n.a.	n.a.	n.a.
Value of agro-chemicals used (million Rs.)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.5	n.a.
Certified seed paddy issued (th. bushels)	80 ²	80 ²	800 ²	n.a.	n.a.	n.a.	n.a.	140
Tractor imports (nos.)	n.a.	900	n.a.	700	600	470	1,474	1,456 ³
Government services (million Rs.) ⁴	3.5	3.3	3.4	3.4	3.4	4.3	3.6	n.a.

1. Prepared land is the acreage on which paddy could be grown and is not equivalent to either gross sown or net harvested acreage.

2. Estimated.

3. Sales.

4. Expenditure on rice extension (100 per cent) on agricultural extension and research, pest control and loss on tractor services (75 per cent). Doubtless many other items should be added under the heading of government services, however, expenditure which should justly be ascribed to paddy services is naturally difficult to identify.

Source: Ministry of Agriculture, *Agricultural Development Proposals, 1966, and Targets and Performance, 1967*; Department of Census and Statistics, *Pocket Book of Statistics*.

TABLE VI
CUMULATIVE EXPENDITURE OF CURRENT INPUTS, 1960/61-1967

	Total	Rs. million	
		Foreign Exchange	Subsidy
Fertiliser ¹	50.3	35.1	12.3
Chemicals.....	n.a.	n.a.	—
Draught power.....	n.a.	n.a.	—
Labour ²	4.4	—	—
Government services.....	1.0	n.a.	1.0
Seeds (government).....	2.9	—	2.9
Seeds (farmers).....	2.1	—	—
Credit.....	—	—	15.0
	60.7	(35.1)	31.2
Value of output (WP).....	93-102		
Value of output (GPS).....	168-184		

1. Excluding duties and taxes.

2. Transplanting only; the value of the labour involved in fertiliser and agro-chemical application has not been estimated.

Source: Department of Agrarian Services, *Administration Report*, Department of Census and Statistics, *Statistical Abstracts*, 1961, 1965.

N. B. - Inputs are largely valued at 1967 prices, output at current prices. Inputs may thus be overvalued.

TABLE VII¹⁸

Year	Actual consumption in thousand tons	Percentage shortfall in relation to target
1965/66	12.1	50.8
1966/67	17.2	45.4
1967/68	26.9	20.4
1968/69	30.5	37.2
1969/70	31.9	34.9

¹⁸ "Report of the Sub-Group of Fertiliser Projection in Ceylon", Dr. Vidyasagara et al., Ministry of Agriculture & Lands (mimeo), Table 5.1, p. 32.

During the 72/73 major cultivation season in the second year of the Five-Year Plan when it was planned to use 37.7 thousand tons of nutrients the shortfall was expected to be more than 55% (these statistics are not officially available yet). During the 65/70 period the average shortfall in respect of the P and K components of fertilisers unfolds an even more distressing picture.

TABLE VIII¹⁹

Year	Shortfall in P	Shortfall in K
1965/66	72.3	62.6
1966/67	65.7	58.8
1967/68	47.6	41.7
1968/69	65.7	59.3
1969/70	49.5	56.6

These shortfalls are in respect of the H varieties only. While the local HYVV, unlike the IR varieties, may not require a spectacular increment in fertiliser usage over the H varieties (except urea) they will at least require as a minimum the optimum quantities recommended for the H varieties. Even though the highest fertiliser input, in terms of nutrients, in any given year was in 69/70 when 31.9 thousand tons of nutrients were used (yielding a shortfall of nutrient application by 34.9 per cent of the target) the Ministry of Agriculture expects to achieve a target of 58,000 tons of nutrients in 72/73²⁰ and over 75,000 tons by 1976.²¹ While we continue to depend on efficient extension work to push fertiliser use, to bridge the gap between past performance and targets we will have to turn more decisively to credit.

(iv) **Credit.** The special characteristic of the HYVV programme is its intensive use of and dependence on material inputs which have to be imported and the prices of which will continue to rise - tractors, fertilisers and agro-chemicals. The larger farm-owners, because of their higher productive capacity enjoy a greater liquidity in respect of working capital and an elasticity that enables them to cope with the fluctuations in factor

¹⁹ *Ibid* Table 5.1 p. 32.

²⁰ "Implementation Programme", Ministry of Agriculture & Lands, 1973, Table 6, p. 30.

²¹ "Report of Sub-Group on Fertiliser Projection in Ceylon" - Dr. Vidyasagara et al., Table 5.5, p. 36. Ministry of Agriculture & Lands (mimeo).

prices. But we saw elsewhere that nearly 74% of the paddy farms average only 1.6 acres and also at Table III a farm which is less than 2 acres cannot be viable. The problem of liquidity will become increasingly acute for the middle and lower size farm holders. Actually, the more affluent farmers will find that with increasing yields and the higher productivity rendered possible by HYVV the problems of the capital market will diminish while the small farmers will find that they will correspondingly increase. We may render this imbalance symbolically.

$$i_s > i > i_b$$

where i is the social cost of capital and i_s and i_b are the price of capital to small and large cultivators, respectively.

The net result of this imbalance is a tendency for the small holder and subsistence operator to drift away not only from the HYVV programme but from paddy production itself, thereby adding to the agricultural proletariat.

Availability of credit, i.e. the volume of credit, the conditions under which it will be available and the institutions through which it will reach the farmer, the speed with which and the uses to which it will be put, will therefore determine the manner in which the three most crucial variables in the package of inputs, will perform.

Institutional credit has become more crucial today than it has ever been before because of the collapse of non-institutional sources. It was revealed earlier in this paper that 54.512 per cent of rural households are in debt and that 81.2 per cent of this debt is owing to non-institutional sources. It was also mentioned that the farmers' recourse to non-institutional borrowing was a major factor in his impoverishment. But non-institutional credit had its virtues. It was readily available without ceilings or collaterals. It was operated on a level of personal trust and did not involve cumbersome, and to the farmer, bewildering procedures. It recognised that the farmer had more than agricultural needs and was flexible enough to accommodate a wide variety of strains to which the farm household is continuously subject. These considerations explain why, in spite of the existence of elaborate government credit schemes since 1948, farmers turned persistently to non-institutional sources for their borrowings. The farmer's predominant reliance on non-institutional credit is brought out in the

fact that in 63/64 and 67/68, when new Credit Schemes were launched and peak-participation was reached, fertiliser sales through institutional credit channels did not account for more than 28 per cent of the total volume of fertilisers sold. The following figures clarify this point:

TABLE IX²²
FERTILISER ISSUES THROUGH INSTITUTIONAL CREDIT

Year	Percentage of Total Volume of Fertilisers sold
1963/64	35.0
1964/65	27.5
1965/66	25.7
1966/67	28.0
1967/68	41.7
1968/69	26.7
1969/70	13.3

We may infer from these figures that non-institutional borrowing has been the mainstay of the smallholding paddy farmer.

But when Government enforced the monopoly purchase of paddy in April 1972, it removed this mainstay without supplanting it. While the village moneylender – the affluent farmer – kept the subsistence smallholder perpetually suppressed, it was also in his interest to see that his borrower did not perish. The affluent farmer had a vested interest not only in his client's continuing impoverishment but also in his survival. The smallholder had at least to exist in order to be exploited. But when the monopoly purchase scheme began to operate, the non-institutional lender lost the only hold he had on his client – his crop. Thereafter the lender had no incentive to lend and the subsistence farmer had nowhere to turn.

The impact of this is already visible on the 72/73 major cultivation season. Current production shortfalls* have to be explained principally in terms of the drying up of credit inputs and not mainly in terms of the drought. Credit flows from all sources

²² Source: Department of Agrarian Services, quoted in "Co-operative System of Small Farmer Credit in Sri Lanka." Godfrey Gunatilleke *et al.*, a Marga Institute Study – to be published.

* 72/73 production was 40% below 69/70 production.

dried up simultaneously. While the monopoly purchase scheme choked off the non-institutional sources which accounted for nearly 75 per cent of the credit requirements of the small holder, defaulting by farmers, due primarily to production shortfalls during the past three years, dwindled the institutional credit flows to nearly 30 per cent of its normal volume.

The small-holder's miseries did not end there. The increase in costs of tractor hire by almost 100 per cent, the rise in prices of fertilisers and agro-chemicals, the sharp all-round rise in the prices of all consumer commodities and two consecutive crop failures – together added to the crushing burden of the subsistence farmer.

The cumulative impact of these factors has been two-fold – both of great significance to the HYVV programme: (a) large extents of paddy tracts which depend on rain water and minor irrigation tanks have gone out of cultivation, thus heightening the social and economic cleavage between the subsistence farmer and the affluent surplus farmer; and (b) a considerable segment of the farmers who remain in production have been forced to withhold fertiliser inputs in order to keep down costs. They now depend on the genetic potential of the HYVV to yield to them the crop which they obtained earlier (with the application of fertilisers). The gross production gains which the HYVV were expected to register are being neutralised thereby.

My hypothesis is that the massive and all-round failure of credit is responsible for the current threat to the HYVV programme and the paddy production drive as a whole.

III. The Record of Credit Performance in the Past and Proposals for the Future

The Ministry of Agriculture was slow to react to the breakdown of credit structures and the drying up of credit flows. However, it has finally responded with a "Comprehensive Credit Scheme". Except for a few flaws, this scheme represents the most integrated approach so far to the subject of credit and contains what is certainly the finest conceptualisation of its problems. To appreciate the content and scale of what is sought to be achieved through the Comprehensive Credit Scheme we have to get a profile of credit performance in Sri Lanka in the past.

The grant of credit for agricultural purposes in Sri Lanka commenced as far back as 1918 when Co-operative Credit Societies were first started. However, it was only in 1948 that the need for credit on an organised basis was first recognised and the Credit and Agricultural Production and Sales Societies were started. These societies did not cater to more than 1/5th of the cultivator population. In 1958 the Multi-Purpose Co-operative Society was started to remedy the shortcomings of the C.A.P. & S. Societies, but the volume of credit granted continued to fall. Then, in 1963 the Extended Credit Scheme was launched. This Scheme represents the first attempt to link credit in a supporting role to the modernising effort. Yet the volume of credit that passed into the hands of cultivators continued to fall after the initial impetus had worn off. In 1967 the New Agricultural Credit Scheme was launched to remedy the shortcomings of all the earlier credit schemes and to serve as a base for the drive towards self-sufficiency. When this scheme, like its predecessors, also spluttered out after the initial thrust had lost its force, leaving the drive towards self-sufficiency in a massive backslide by the end of 1972, the Comprehensive Credit Scheme was formulated. The new Scheme has been a considerable time on the threshold and is still awaiting a vigorous implementation drive.

The profile of credit in Sri Lanka from 1948 to 1972 reveals the predominance of the following elements.²³

1. A limited participation in institutional credit. Participation in institutional credit even in the peak years of 63/64 and 67/68 did not exceed 35 and 42 per cent respectively of the total number of paddy proprietors.²⁴

2. Lack of comprehensiveness of Credit Schemes. The lack of participation has been due to the lack of comprehensiveness. Credit schemes failed to recognise that the small-holding subsistence cultivator represents a multiplicity of needs besides those

²³ For a comprehensive evaluation of credit performance in Sri Lanka see "The Co-operative System of Small Farmer Credit in Sri Lanka" – Godfrey Gunatilleke *et al.*, Marga Institute (to be published).

²⁴ This accounts for the heavy reliance on non-institutional credit which earlier in this paper we saw accounted for nearly 70 per cent of the rural borrowings.

immediately connected with agricultural production. When credit fails to match those other needs (illness, death, weddings, religious ceremonies and other assorted demands upon the meagre household budget) the cultivator converts his agricultural credit to meet them, impairs his farm productivity, goes into default and drifts out of the Credit Scheme. He then turns to non-institutional borrowing and gets trapped in a vicious circle of indebtedness, low productivity and abject poverty.

3. High Record of Non-Payment. Out of a total of Rs. 323 million granted as loans to paddy cultivators through Co-operatives since 1947, a sum of Rs. 76 million remains unrecovered. A steady deterioration in the level of repayment, within a short period of the inception of every credit scheme is now a familiar experience. Under the Extended Credit Scheme which came into operation in 1967, 70 per cent of the loans granted in the first year of the scheme were repaid. Repayments fell to 54.5 per cent and 47.7 per cent in the succeeding years.

In the course of the Survey of Defaulters carried out by the Central Bank in 1972, it was discovered that 32 per cent of defaults was caused by crop failure and 61.2 per cent was due to low income. Significantly 14.6 per cent of the defaulters had never intended to repay their loans.²⁵

4. Failure to liberate Cultivators from Indebtedness. On the whole, institutional credit has failed to release the cultivator from indebtedness. This is disclosed in the Survey of Rural Indebtedness carried out by the Central Bank in 1969 (referred to earlier in this paper). According to this report over 54 per cent of all rural households are in debt and of these over 70 per cent are indebted to non-institutional sources.

5. Use of Agricultural Credit as a Vehicle for Welfare Policies. The general image that both governments and farmers have of credit schemes is that they are instruments for disbursing welfare. This is evident in the low rates of interest charged from borrowers and the leniency with which defaulters are treated. Subsidies should certainly be passed on to cultivators if their farms are to be

²⁵ "Survey of Defaults", Central Bank 1971, p. 30.

raised above subsistence levels, but to make interest rates on loans a vehicle of welfare is disastrous. Not only does it destroy the commercial nature of the transaction but it also encourages cultivators to take loans at low rates of interest and re-loan at higher rates.

6. Inefficiency of Institutions that disburse credit. The handling of credit by co-operatives has been characterised by inordinately long delays, unresponsiveness to farmer needs, managerial inefficiency, fraud, leniency towards individuals in the matter of loan recoveries, and vulnerability to local political influences in decisions relating to loan disbursements and recoveries.

7. Separation of Credit from Marketing, Rural Savings, and Crop Insurance. Credit was not linked either to the marketing of farm-produce or to a scheme to encourage savings amongst farmers, or to a widespread scheme of crop insurance. Had credit been tied to marketing in a way not altogether dissimilar from the way in which the non-institutional lender ties his loan to the farmer's produce and had it simultaneously been linked to a compulsory savings scheme and an efficient crop insurance scheme, the problem of defaulting and the progressive falling out of farmers from credit entitlement could have been avoided and farm incomes and productivity stabilised.

8. Failure to recognise regional differences and variations in needs and capacities between individual farmers. All credit schemes up to 1972 failed to recognise the multitude of varying agro-climatic zones which justifies and requires different credit ceilings. Similarly there has been no attempt to measure or even to recognise the special circumstances of individual farmers and to assess their creditworthiness. The ordinary desire of any creditor to assess the creditworthiness of his borrower had no place in any of the credit schemes in operation so far. The indolent has been treated on a par with the industrious.

9. Lack of effective credit supervision. There has never been an effective follow-up of credit for ensuring that loans are put to the uses for which they are taken.

The Comprehensive Rural Credit Scheme which has just been approved and is awaiting implementation provides evidence of an integrated approach to the whole concept of credit.

The base of this Credit Scheme will be the Co-operative Rural Bank which will be a branch of the Primary Co-operative Society but will function as a commercial bank. These rural banks will assess the creditworthiness of individual applicants and grant loans to meet the totality of their needs, and will recover the loans as any commercial bank would.

The declared objectives of this new Scheme are (1) to enable farmers to take loans to meet their needs all the year round; (2) to relate savings to credit so that the farmer may be able to draw on his own surplus to meet his need for intermediate and working capital; (3) to allow for regional variations which justify different ceilings for different areas; (4) to improve the recovery of credit; (5) to decentralise and to de-bureaucratise decision-making relating to loans by delegating responsibility to the local rural banks instead of reserving it to the central government; and (6) to make provision for a system of supervising credit for ensuring that loans are properly used.

This scheme has not gone into operation yet i.e. in Sept. 1973. So we cannot evaluate performance. But certain aspects of the proposal attract comment:

- (a) The chief virtue of this scheme is that it recognises the totality of the farmer's credit needs. But it does not reveal to us on what grounds it bases its expectations that these loans will ever be repaid. The 1969 Central Bank Survey of Defaults revealed that 68.2 per cent of defaulting was caused by crop failure and low income. We must not forget that the malaise of low productivity is rooted as much in the social structures and the economic system within which the farmer works as it has to do with the availability of credit and the vagaries of climate.
- (b) The move to link rural credit to savings is sound but here again we are presuming surpluses on a scale wide enough to sustain the linkage. A study of Table III of this Paper will reveal that such a presumption is wholly without foundation. Will it not be more realistic to link credit to an efficient crop insurance scheme?

- (c) To allow for regional variations in credit needs and for varying levels of creditworthiness among individual farmers is necessary but we must not fail to see that this will tend to consolidate and perpetuate social and class stratification both between regions and within regions.
- (d) The need to supervise credit has been felt keenly for a long time. The Comprehensive Credit Scheme recognises this need but gives no indication as to how it is to be done except to make it the responsibility of the Rural Bank. Should not the provision of credit for agriculture be an extension responsibility? Only extension personnel can judge competently. Will a Bank which is commercially oriented be competent to follow up and decide on the genuineness of the agricultural needs and activities merely by carrying the appellation 'Rural'? Should not the answer be sought in the Agricultural Productivity Centre which is expected to be a focus for and unify all agricultural activities of the village?
- (e) The weakest aspect of the Comprehensive Scheme is that it excludes all defaulters under the previous schemes from its benefits. If the HYVV Programme is to be rehabilitated, the first thing to do is to bring back into production large numbers of farmers who have rendered themselves ineligible for credit by defaulting and ceased to be production units. The Monopoly Purchase Scheme affords an opportunity to tie not merely all future credit but all past arrears as well to marketing. It should enable the recovery of all outstanding loans within a period of 3 to 4 years. If the massive HYVV Programme is to be activated seriously and the drive for self-sufficiency renewed, an essential precondition will be the re-inclusion of all cultivators in the new Credit Scheme.

IV. Can credit flows together with the inputs they render possible, alone secure for the HYVV their production targets?

I wish to close this discussion by bringing into question some of the assumptions on which the argument has so far rested.

Briefly, the argument so far has gone somewhat on the following lines: The smallness of his holding and the poverty in which he

is perpetually embedded, compel the farmer to turn to borrowings for his working capital and other domestic needs. The failure of institutional sources (due to a multiplicity of factors) to meet all his credit needs, have caused the farmer to turn overwhelmingly to non-institutional sources for support. This dependence has served only to further consolidate and deepen his impoverishment. But the enforcement of the monopoly purchase scheme has taken away from the farmer even this support, and his destitution is now near-total.

Far from meeting the special input demands of a massive HYVV programme, current credit flows are not capable of sustaining production even at subsistence levels. Consequently, paddy production which maintained a steady upward trend since 1966, has not merely lost its momentum but has even gone into a steep decline.

The immediate need seems to be to drastically overhaul the institutional credit system so as to meet the credit requirements of the farmer on a comprehensive scale and help resuscitate his farm. The Comprehensive Credit Scheme, which is the Government's latest response to the farmer's credit needs, shows promise of handling this with a greater degree of competence than we have seen before.

This argument assumes that the application of external stimuli will ultimately determine the capacity of small holdings to absorb technology and rise above the subsistence line into self-sustaining growth. It ignores the limits imposed by the very structure of small holdings - limits which do not admit of removal except through a comprehensive engineering of the structures themselves.

Basically the question is, granted the size of the small holdings we have in Sri Lanka²⁶ (average paddy holding of less than 2 acres, 65% of the operators working less than 1 acre, 33% of the paddy holdings under 2 acres averaging less than 0.8 acre and 24% of the paddy holdings in the 2-5 acre group averaging only 1.6 acres) can they be expected to rise above subsistence levels - whatever the level of inputs?

²⁶ See Table II on page 22 of this paper.

Along with the problem of productivity the structural weaknesses of small holdings always throw up, we should consider the cost implications of the HYVV programme for the individual small holder. The shift to a heavy reliance on inputs, which for a long time to come will continue to be imported and therefore susceptible to the general international trend of rising prices, ties the farmer to a price structure which must inevitably be weighted against him, and from which, once caught up by it, he cannot extricate himself. What this means in terms of the family budget can be gauged when we call to mind that (assuming 1970 costs as constant) a family of 6 units working a 2-acre holding will have to produce 85 bushels per acre per year (and even assuming that he will continue to get a free measure of rice, at least 56 bushels per acre per year) merely in order to meet its barest subsistence needs.²⁷

Quite clearly, the Government cannot absorb any part of these rising costs without adding to its already overloaded subsidy burden. Neither is it likely that increases in credit flows alone can alleviate the situation. Assuming that credit structures will be able to respond sufficiently fast to meet the vagaries of rising prices, at the most they will only just enable the farmer to continue working his farm at a subsistence level.

We must also mention especially the implications for the small farmer of the current reliance on tractors. In the tractor owner, who is invariably an affluent farmer, the subsistence farmer has acquired a new oppressor, more intractable than the feudal land-owner. A new feudalism of technology has grown up around the tractor owners. The Paddy Lands Act notwithstanding, smallholder subsistence farmers are slowly losing operational control of their paddy lots to the tractor owners.²⁸

The heightening disequilibrium in which the small holder finds himself in relation to the HYVV programme (a relationship which is characterised by diminishing capacity and spiralling costs) is matched by another area of disequilibrium - that between the Low and Middle Potential areas and High Potential areas. Soil, water and other infrastructural properties of the High Potential

²⁷ See Table III of this paper.

²⁸ They are becoming wage-earners on their paddy farms.

areas, make them more responsive to the HYVV. They enjoy higher capacities and manifest benefits quickly. The low and middle potential areas (which account for two-thirds of the total paddy-growing area of Sri Lanka) are characterised by uncertain water resources, unresponsive soils and an inferior infrastructure. They respond slowly or not at all. This has given rise to a serious disequilibrium both between regions and within regions. But this imbalance is not disclosed in the gross national production figures. One of the dangers of the HYVV programme is that gains registered in the High Potential areas conceal the fall in productivity in the Low Potential areas, thereby suppressing or turning the focus away from the tensions that this unevenness is fast generating.

The net result of these uneven responses is a heightening tension between social groups and an increasing polarisation both vertically and horizontally, where the rich farmer and the High Potential areas are growing richer and the poor farmer and the Low Potential areas poorer. An empirical evaluation of the General Election results of 1970, when despite spectacular gains in paddy production registered by the then Government's food drive, the ruling party was roundly beaten in the very areas in which these gains were recorded, might well be a rewarding undertaking in this context.

The HYVV programme has brought to the surface and accentuated the need for a thorough-going examination of the tenurial base of paddy cultivation. The contradictions that are beginning to define themselves sharply are not likely to be resolved by credit and extension inputs alone. The structural weakness of small holdings and the tensions generated by uneven rates of growth between holdings and between regions have to be tackled at a more fundamental level.

It seems inevitable that at least within the small-holding sector and within the Low Potential areas we will have to move towards collectivist or co-operative forms of ownership and production.

APPENDIX

"THE PRODUCTION WAR"

The article that appears in the preceding pages was written some months before the intensive drive for increased agricultural production – the "Production War", was launched in October 1973. This drive alters to an extent the profile sketched in this article.

The target of 850,000 acres to be planted in HYVV during 72/73 was not realised. This was due mostly to the (a) failure of credit facilities; (b) non availability of tractors; (c) steep rise in costs of production, and (d) drought that set in towards the end of the main cultivation season. For 73/74 the target for HYVV has been lowered to 650,000 acres.

The failure of credit was probably the main factor in the decline of paddy production during the past three years. While institutional credit continued to show a low performance during 72/73 – see Table 4 – when Government became the sole purchaser of paddy and the open market was closed down, non-institutional credit which accounted for nearly 70% of the farmers' credit needs was virtually choked off leaving a massive credit vacuum.

The main flaw in the Comprehensive Credit Scheme (referred to in the main article) viz. the denial of credit to defaulters has now been rectified. The 73/74 credit figures should therefore show a sharp upward trend.

The shortage of tractors and tractor spares and the resulting exorbitant hire charges levied by tractor owners was also a factor in the collapse of paddy production during the past few years. Hard on the heels of the declaration of "war", tractor spare parts were airlifted so as to rehabilitate idle machine holdings. Govern-

ment Agents have also been given powers to requisition any privately owned tractor for prosecuting the "war". We cannot claim that these measures alone will meet adequately the problems thrown up by a basic shortage of machines.

Most importantly, the guaranteed price for paddy has been raised by nearly 80% over the 72/73 price. In March 1973 the guaranteed price was raised from Rs. 14/- to Rs. 18/- per bushel and in October 1973 to Rs. 25/- a bushel. The impact of this revision on the paddy production drive must naturally be spectacular. This increase has partly neutralised rising costs and has again restored incentives as a factor in production. Its immediate effect is to be seen in the feverish attempts by villagers to bring back to cultivation large extents of paddyland which were allowed to idle during the past few years and open up new lands, even illicitly, in order to benefit from the new incentives. This factor alone should achieve a notable break-through in paddy production.

In addition to the re-deployment and reinforcement of conventional factors – seed, credit, tractors and price incentives – some new forces have been mobilised for the "war". It is felt that a major break-through in agricultural production and far reaching social and institutional transformations far beyond the declared goal of self-sufficiency might well result from these new strategies. What are the constituents of this new package?

(1) The de-bureaucratisation of the production machine and its politicisation down to implementation levels. All agricultural production drives of this country up to 1973 were centered on the Ministry, Department, Government Agent, D.R.O. Matrix. This line of command has now been fractured. At important points in this structure, political command posts have been set up, not merely to define policy and strategies but to supervise and ensure their implementation at tactical levels. The conventional bureaucracy and extension personnel have been clearly subordinated to these authorities. These re-arrangements have inevitably caused frictions and some dislocations in the machine but they have also generated a new enthusiasm and a much wider commitment of energies at grass root levels. It is an attempt to transform the agricultural production drive into a Peoples' War.

We cannot say that the politicisation that is sought to be effected at the moment can be sustained and will prove functional in the long run. It will certainly ensure major gains in the short run but if those gains are to be consolidated and widened, the politicisation process will have to be worked out more consistently and through trained cadres through all levels of our structures. The interpolation of Deputy Ministers and Members of Parliament at important points cannot by itself achieve those goals which only trained and highly disciplined cadres can secure.

If the training and deployment of these cadres is not undertaken speedily and efficiently, once the "war" fever has worn off, we might be left only with the shambles of a bureaucratic machine with nothing in its place.

(2) A shift of the strategic command headquarters for the war from the Ministry of Agriculture to the Prime Minister's Secretariat. The "Generalship" for the war is supplied by the Prime Minister herself. The assumption of this role by the present Prime Minister must not be confused with a similar role assumed by the former Prime Minister during the 65/70 food drive. The then Prime Minister worked within and at the head of a well structured conventional bureaucratic machine. He went for limited objectives. He did not head a major offensive for transforming social and economic structures. The present Prime Minister is clearly in command of and has thrown into battle forces much larger than conventional bureaucratic cadres. She is relying heavily and calling upon political cadres to manage the "War" and the goal is more than merely the implementation of a "crash programme". It seems geared to clearing the ground for far reaching political and societal transformations.

(3) A return to an emphasis on food production as the pivot of our economy. When the new Government assumed office in 1970 the drive for increased agricultural production lost political momentum. Even though the Ministry of Agriculture started to lay the institutional foundation for far reaching transformations in our agriculture, the energies of the Government were dissipated on other less productive pursuits such as the excessive reliance on Development Councils for generating employment in the rural sector. Now, however, the drive for agricultural production has

again been restored to its place as the centrepiece in the Government's plan for transforming the economy.

(4) Linking agricultural production to a programme of Land Reform. For the first time since 1958, when the Paddy Lands Act was passed, a food drive in Sri Lanka has been backed up by at least attempts at Land Reform. This is a significant change. Reliance on HYVV is not to be at the expense of, or as a substitute for, re-arrangements of tenurial relations. Although the Land Reform movement is not likely to result immediately in the consolidation or expansion of paddy holdings, it at least releases for cultivation large extents of new lands which afford new opportunities for agriculture in the villages.

The total outcome of all these factors (provided normal weather conditions prevail), should be a sharp rise in paddy production and subsidiary foodstuffs in 73/74. The question remains however whether this sense of "war" can be sustained over the long haul and, what strategies can be evolved to ensure the consolidation and the widening of the gains that will be achieved in the short term.

N. J.

THE UNEMPLOYMENT PROBLEM WITH SPECIAL REFERENCE TO THE RURAL SECTOR

R. K. SRIVASTAVA*

Unemployment has emerged as a serious problem in the South-East Asian countries in recent years, but in Sri Lanka it has already reached critically high proportions. The following table summarises the statistical picture of unemployment in selected countries of the region:

TABLE 1

Unemployment Rates: Selected Countries¹ (% of Labour Force)

Ceylon	(1968-69)	..	11.5%	Malaysia (West) (1968)	..	8.9%
India	(1967)	..	1.8%	Philippines (1969)	..	6.7%
Indonesia	(1965)	..	2.3%	Thailand (1969)	..	0.2%

The high level of unemployment in Sri Lanka is the result of the interaction of several factors which have been gathering momentum over the years. Most important among these are the demographic factors. These had three distinct aspects: Firstly, the dramatic decline in death rates in the late 1940's coupled with the persistence of traditionally high birth rates resulted in a population explosion which is unprecedented in the developing countries of the S. E. Asian region. A little over half the present population of Sri Lanka was, thus, born after 1948. Moreover, welfare commitments which appeared reasonable and within the economic competence of the country in the mid 1940's have increased at an alarming pace as a result of the population explosion. Secondly,

* A paper read at a Seminar on "Land and Employment" organised by the Marga Institute in Colombo in January 1973. The views expressed in this paper are the responsibility of the author, and do not in any way commit the I.L.O.

¹ The surprisingly low rates in India, Indonesia and Thailand are due to a much higher rate of disguised unemployment and under-employment.

the decline in mortality raised the average life-span quite significantly and resulted in the slowing down of retirements and withdrawals of older persons from the labour market. Over 45% of the population above the age of 65 continues to be in the labour force. A final result of the population explosion was its tremendous impact on labour force growth some 15 to 18 years later.

By early 1960s each succeeding wave of new entrants into the labour force was larger than before. Current projections of net labour force growth are 3% per annum or about 140,000 persons in all age-groups.

Thus, on the demographic side, we have a picture of accelerating population growth, longer life-spans, slower withdrawals and accelerated labour force growth. Looking back over two decades, the entire demographic sequence appears to bear close resemblance to the gathering of storm clouds over the horizon – slowly but inexorably – ready to burst as soon as the internal pressure became unbearable.

There were other factors contributing to, and compounding, the difficulties, some educational and some economic. On the educational front, there was a phenomenal expansion of schools and enrolments during the last two decades² – and to begin with, this almost completely absorbed the impact of the population explosion by providing a rapidly expanding channel of educational opportunities for the multitude of children (who otherwise would have had nowhere to go). Thus, educational expansion served to delay the entry of young job-seekers into the labour market by keeping them for increasingly longer periods in the educational cycle. In a sense, education was buying time off (a) population pressures, and containing them albeit for the time being, and (b) economic pressures, to allow the economy to expand sufficiently to accommodate the increasing numbers of job-seekers.

But this holding operation could not be sustained for long as neither the pressure of population growth eased soon enough nor did the economy respond adequately to the challenge of employment creation.³ In the absence of these concomitant

² Total enrolments increased from less than 1 million to over 2.5 million between 1946 and 1966, secondary school enrolments from about 86,000 to 350,000 and university enrolments from about 1,000 to over 12,000.

³ During the period 1948–1968, employment increased by 40% and unemployment by 280%.

factors, the educational explosion compounded immensely the problem of unemployment by raising expectations, and by releasing into the labour market increasing numbers of educated youth who were largely unwilling to accept the given socio-economic environment.⁴

The broad lines of the above analysis have relevance for almost all the developing countries of South-East Asia, and as the Seers Report observed, “a confrontation is emerging in all parts of the world between the pattern of job-opportunities and the expectations of young men and women, and Sri Lanka’s acute structural disequilibria in this and other fields cast a horoscope for many other countries”.⁵

Quantitative Picture

Having looked briefly at the origin of the unemployment problem, we can now turn to an examination of the unemployment situation in some detail on the basis of data from various surveys and investigations. The Labour Force Survey (1968/69)⁶ reported that the total number of unemployed persons was of the order of 476,000⁷ of which about 321,000 (67%) were men and 155,000 (33%), women. The broad division of this total by different sectors was urban 21%, rural 69% and estate 10%. Over the years, these proportions have remained fairly constant, and expressed as proportion of the respective labour force of the sectors concerned, they show the following picture (Table 2).

⁴ The stock of persons with about 10 years of education has been rising at the rate of about 10% per annum throughout the 1960s.

⁵ ILO: *Matching Employment Opportunities and Expectations – A Programme of Action for Ceylon*, Geneva 1971, para 34.

⁶ The Survey was conducted in two rounds and provides comprehensive information on the characteristics of the unemployed.

⁷ This and other estimates formed the basis of the projection of unemployment for 1971 (550,000) which was used in the Five Year Plan. It is important to emphasize that there are many difficulties of definitions and concepts in measuring unemployment, and often a little change in these can significantly alter the unemployment estimates. Moreover, statistical estimates of unemployment tell us too much as well as too little – too much by presenting the data in neat apparently non-interchangeable categories and too little, by omitting complex qualitative dimensions.

TABLE 2
Rural Urban Unemployment Rates
(% OF RESPECTIVE SECTORAL LABOUR FORCE)

	ILO 1959-60 Survey		Population L.F. Survey 1963		1968
	(1)	(2)	(3)	(4)	(5)
Rural	9.8	11.8	7.3	10.4	9.4
Urban	14.4	18.3	9.0	14.8	14.2

Notes (1) By main activity (2) By including secondary activity.

(3) Census estimates are low because of the restrictive definition of unemployment.

(4) By main activity during one week. (5) By main activity during one year.

Thus, for nearly a decade, rural unemployment rates remained stable around 10% of the labour force and urban rates around 14% of the labour force. The recent Socio-Economic Survey (first round), however, showed an increase in these rates to 18.9% in urban and 15.4% in rural areas.⁸

The most important feature of the unemployment situation in Sri Lanka is the predominance of youth, both in urban and rural areas among the unemployed. Data from various enquiries have shown that youth in the age-group 15-24 constitute over 75% of the unemployed.⁹ Another important aspect of unemployment is that its incidence among women is almost as high as for men, and in certain cases even higher. A third aspect is the increasing share of the educated among the unemployed, and particularly the youth.

TABLE 3
Unemployment by Age-Groups, 1968-69

Age Group	Male	Female	Total	(% of Total)
15 - 24	246.9	118.3	365.2	(76.6%)
25 - 34	45.0	29.4	74.4	(15.6%)
35 +	29.3	7.1	46.4	(7.8%)

⁸ The Socio-Economic Survey reported a total unemployment of 545,800 (I & II rounds) of which rural unemployment was 379,400 (69%).

⁹ The share of the age-group 15-24 was reported to be 82.6% in the Socio-Economic Survey, 1969-70.

Table 4 shows the unemployment rates for men and women in urban and rural areas for selected age-groups.¹⁰ This table clearly confirms the predominance of the age-groups 15-19 and 20-24 in urban and rural areas, and also among men and as well as women. It can be readily seen that unemployment rates for women exceed those of men in all the major age-groups both in urban and rural areas. To a large extent this is a result of the spread of education in rural areas and the increasing participation of women in education.

TABLE 4
Unemployment Rates by Sex and Sector
(SELECTED AGE GROUPS)
PERCENTAGE OF RESPECTIVE LABOUR FORCE

Age Group	Urban		Rural		All-Island	
	M	F	M	F	M	F
15 - 19	42.0	53.8	31.8	37.6	34.7	30.6
20 - 24	30.4	51.7	24.1	39.7	23.4	28.8
25 - 29	10.7	28.5	9.2	25.9	8.4	15.9
30 - 34	5.2	11.4	4.1	10.5	3.9	6.9

Unemployment & Education

In considering the interaction between education and employment, it is possible to identify three different trends.¹¹ Firstly, the probability of obtaining employment appears to diminish as the educational level of the labour force entrant rises. Secondly, it appears that despite this shrinkage in the probability of obtaining a job with more education, the actual range of "better jobs" rises with educational level, and so do income prospects. Thus, a stage has not yet been reached where youth would be discouraged from continuing in the educational system. Thirdly, there is evidence of increasing unemployment among educated women. Table 5 shows this picture clearly for the country as a whole for youth in the age-group 15-24.

¹⁰ Estates are not shown separately but are included in the all - Island average.

¹¹ These are discussed more fully in R. K. Srivastava and S. Selvaratnam: Youth Unemployment in Ceylon - Problems and Prospects, *Marga*, Vol. 1 No. 4, p. 39-41.

TABLE 5
Distribution of Unemployment among Youth by Education (%)

Educational Status	Male	Female	Total
Illiterate	4.3	2.3	3.7
Literate			
(a) Below Grade 5	22.2	9.8	18.5
(b) Grade 5 - 7	21.5	9.4	17.9
(c) Grade 8 +	31.7	30.5	31.4
(d) G.C.E. (O)	18.3	42.6	25.5
(e) Above G.C.E.(O)	2.0	5.4	3.0
	100.0	100.0	100.0

Source: Labour Force Survey - first round.

One can easily discern the higher unemployment rates among women in the youth age-groups 15-19 and 20-24 by considering them separately and by educational level. It is noteworthy that even in the rural areas, the unemployment rate among women is higher than for men for all educational levels in the age-group 20-24 and for two of them in the age-group 15-19.

TABLE 6
Unemployed Youth by Education, Urban & Rural (%)

	15 - 19				20 - 24			
	Urban		Rural		Urban		Rural	
	M	F	M	F	M	F	M	F
No Schooling	14	11	11	—	17	38	—	14
Primary	48	28	39	19	11	56	13	36
Middle	52	73	36	54	34	77	33	54
G.C.E.(O)	86	88	80	100	41	54	61	78
Above G.C.E.(O)	—	—	—	—	20	25	50	100

Source: Socio-Economic Survey - first round.

Waiting Period

In considering the question of employment creation, it is usual to consider two other important aspects of unemployment. These relate to duration of unemployment and the attitudes of the unemployed towards various job-possibilities. Some data are available on these points. In Table 7, information on the duration of unemployment has been presented. This shows that the bulk of the unemployed have been waiting for employment for more than 12 months both in the urban and the rural areas. This is true for males as well as females. Information collected in 1969 on

unemployed university graduates showed that for over 6,200 graduates, the distribution of waiting period was: 1 year - 36%, 2 years - 23%, 3 years - 15%. A special sample survey of the G.C.E.(O) Level unemployed showed that on the average, these school-leavers had been unemployed for 4-5 years.¹²

TABLE 7¹³
Duration of Unemployment by Sex & Sector (%)

Duration	Previously Employed		All-Island	Never Previously Employed		All-Island
	Urban	Rural		Urban	Rural	
	Male					
Below 6 months	12.2	21.8	17.7	8.7	7.9	7.7
6-11 months	14.3	13.2	12.3	18.2	17.3	18.4
12 months and above	56.8	37.9	46.3	63.4	62.2	61.0
Unspecified	16.7	27.1	23.7	9.7	12.6	12.9
	Female					
Below 6 months	7.8	7.3	17.8	9.7	7.6	8.1
6-11 months	4.2	10.4	7.8	16.7	14.9	15.8
12 months and above	49.3	56.1	45.3	62.7	70.1	68.1
Unspecified	38.7	26.2	29.1	11.9	7.4	8.2

The question then arises as to how this period of waiting is being utilised. A survey on the attitudes of undergraduate students in the university indicated that among the arts students at least 15 per cent would continue their studies, 13 per cent would do some other work within the household.¹⁴ A study of questionnaires from a sample survey of disguised unemployment showed that those who had no work during the reference week had no possibility either of working on land or in other self-employment. The unemployed youth, particularly those with G.C.E.(O) Level qualifications, also indicated that they were unwilling to participate in any work on the family farm.¹⁵

¹² Data on waiting period cannot be regarded as very firm since they have been collected only once. More frequent enquiries are needed to provide trends and averages over a time period.

¹³ Data regarding the estate sector are not shown separately but are included in the all-Island average.

¹⁴ ILO: *Matching Employment Opportunities and Expectations*, Technical Papers, p. 149, para 11 and table.

¹⁵ This survey was conducted in 11 selected villages to ascertain the pattern of income and activity of persons of the working age-group, 15-64.

Attitudes to Employment

We know something about the attitudes to employment but in this matter also much more sociological investigation is urgently needed. Data on attitudes has to be interpreted with caution, particularly because the employment preference of an individual is influenced by a variety of factors such as income expectation, location of proposed employment, nature and status of the job, short-term and long-term prospects etc. In the absence of specific information regarding alternative job-possibilities, the questions asked in a survey are merely hypothetical and therefore the responses may not reflect well-considered options or choice. On the other hand, it can be argued that in the prevailing situation of a more or less stagnant employment market and the very limited possibilities of finding alternative jobs, the unemployed person would respond realistically to preference questions (even in a survey) and thus, the sum-total of responses might not differ significantly from actual preference patterns.

Be that as it may, we find that the Labour Force Survey (1968-69) which looked into the question of employment preference provided the following results. If one regards the response "any employment" as an attempt to get over the problem of answering the question somehow, the predominance of "clerical job" is at once apparent.

TABLE 8

Distribution of Unemployment by Employment Preference . Sex and Sector (%)

Employment Preference	Male		Female	
	Urban	Rural	Urban	Rural
1. Any Employment ..	43.0	42.7	30.3	26.1
2. Unskilled Jobs ..	14.9	19.1	4.2	8.8
3. Semi-skilled or skilled Jobs ..	7.7	7.0	5.9	12.0
4. Clerical Jobs ..	14.8	13.7	29.8	24.7
5. Teaching ..	1.6	2.7	15.8	17.7
6. Technical or Professional ..	7.1	3.8	4.2	3.6
7. Unspecified ..	10.9	11.0	9.8	7.1
	100.0	100.0	100.0	100.0

For those unemployed who completed G.C.E.(O) Level, it is possible to examine the position a little more as data are available from three different surveys: Labour Force Survey 1968-69,

Rural Credit Survey 1969, and a Special Sample Survey of G.C.E.(O) Level unemployed conducted in 1971. According to the Labour Force Survey, this group of unemployed was distributed in the proportion 22:78 in urban and rural areas and this held good for both men and women. Of the men, 21% were willing to take any employment, 53% clerical employment and less than 9% wanted to take up teaching. Among the women, 43% preferred clerical, 30% teaching and 14% any employment. The rural-urban differences were not very pronounced - with 48% rural and 50% urban wanting clerical employment and 20% rural and 16% urban wanting teaching jobs.

Table 9 provides a comparative picture of attitudes to employment from the three surveys. Although the results from the three surveys are not strictly comparable (since their scope and objectives differed), it is possible to draw some general conclusions. The marked preference for clerical type of employment even in the rural areas is confirmed by all the three surveys. It is possible that those who mentioned 'any employment' were more desperately in need of a job than those who gave a more definite answer. The preference pattern does not seem to differ very significantly for men and women.

TABLE 9

Pattern of Employment Preference among G.C.E. (O) Level Unemployed^{1 0} (%)

Preference Category	Urban	Rural
Clerical	1 50	48
	2 —	54
	3 44	32
Teaching	1 16	20
	2 —	13
	3 19	28
Any Employment	1 13	19
	2 —	13
	3 —	10

For university graduates, employment preference shows a remarkably uniform pattern of response. In a survey conducted in 1969, 94% clearly preferred government jobs, 76% indicated

^{1 0} 1 - Labour Force Survey. 2 - Rural Credit Survey.

3 - Special Sample Survey. Other categories of employment preference were not significant and have, therefore, been omitted.

willingness to take jobs in State Corporations and 25% mentioned Co-operatives as a possibility. Only 1.5% were willing to join the private sector and 1.3% mentioned self-employment. In a similar survey in 1971, 87% chose public sector, 10% private sector and 3% self-employment.¹⁷

1972 Picture

In the preceding paragraphs, we have tried to summarise the findings of various surveys on the magnitude, composition, and characteristics of unemployment in the urban and rural sectors. We can now turn to a consideration of the position in 1972 based on preceding data.

Bearing in mind the limitations inherent in unemployment estimates and the difficulties in making projections for a year (1972) for which no investigations have been carried out, let us begin with an overall estimate of 650,000 unemployed in 1972. This figure may not represent the actual situation but would certainly provide a good starting point for analysing the consequential picture. On the basis of available information, the breakdown of this total could be as follows:

Total Unemployment (1972)	..	..	..	650,000
Urban 20%	..	..	..	130,000
Rural 70%	..	..	..	455,000
Estate 10%	..	..	..	65,000
Rural Unemployment (1972)	..	..	..	455,000
Men (67%)	..	..	..	305,000
In age-group 15 - 24	..	..	..	229,000
In age-group 25 +	..	..	..	76,000
Women (33%)	..	..	..	150,000
In age-group 15 - 24	..	..	..	112,500
In age-group 25 +	..	..	..	37,500

The Employment Strategy

Let us also assume for the sake of discussion that the unemployment problem is so acute that attitudes and employment preference would not pose an insuperable problem to any given

¹⁷ For a further discussion of the question of employment preference, see R. K. Srivastava & S. Selvaratnam: *Youth Employment in Ceylon, op. cit. Marga* Vol. 1 No. 4, pp. 42-47.

employment strategy.¹⁸ What then is the kind of effort that is needed for the rural sector? What rates of growth are required for the economy as a whole and for various industrial sectors - agriculture, industry, construction, infra-structure and services? How long will it take to reduce unemployment to reasonable proportions? Some of these questions are discussed and answered in the Five Year Plan and the Seers Report.

Both the documents consider a 5 per cent growth in agricultural output to be feasible provided a major effort is made in this sector. They also emphasize that to achieve the employment target of 2.5 per cent per year it would require not only success with output but also a very vigorous effort for increasing the labour intensity of agriculture, both in existing land as well as in new land. A "package of proposals" would have to be devised and quickly implemented and this would cover all aspects - seed, fertilizer, pricing policy for agricultural implements, tractors and weedicides, credit, marketing and institutional arrangements for carrying through the entire programme.

The plan relies heavily on the development of new land for solving the problem of agricultural output as well as rural unemployment. From the employment angle, the basic questions are:

- (1) Can 400,000 acres of new land be developed and made ready for settlement and cultivation during the next 4-5 years?
- (2) How will this land be allocated? What will be the costs and subsidies involved? Will the financial burden be too much in terms of return?
- (3) Has action been initiated to work out cropping patterns which will ensure an adequate income to the new peasant? What progress has been made in regard to diversification, crop rotation and other possibilities?

¹⁸ Elsewhere we have suggested that the question of changing attitudes and preferences should be tackled during the waiting period through a special programme of youth mobilisation; *Youth Employment in Ceylon, Op. Cit. Marga* Vol. 1 No. 4, pp. 46-47, 55-56.

- (4) Have institutional arrangements been planned to put the prospective small-holders fully in the picture as regards training in new crop-patterns and farming techniques, supplies and marketing? What are the plans for extension, credit and marketing? What about individual income expectations?
- (5) How will labour-intensive technology be introduced in the new land, and to what extent? Will the dry zone respond to such technology?
- (6) What measures are planned for providing the social infrastructure and amenities in the new land? It must be remembered that the whole historical and sociological context was different when the Dry Zone flourished in the past.

These and other questions need to be satisfactorily answered in order to make the employment targets more meaningful and realistic.

THE SOCIOLOGY OF CORRUPTION*

SEYD HUSSEIN ALATAS

Anyone attempting a sociological analysis of corruption will eventually be confronted by a methodological problem. The accepted and generally applied methods of social research such as the interview, the questionnaire and statistical analysis, cannot be applied here as long as corruption is considered as a shady transaction. The most that a sociologist can do is to observe the phenomenon and its effects and to gather as much confidential information as possible. Even the public disclosures of corruption, as those accompanying a fallen regime, do not reveal as much as there is to be revealed.

The sociologist studying the phenomenon of corruption has to be fully conversant with the history, the culture, the language and the circumstances of at least one rich and complex instance from which he can derive his data and test his theories. Without the background knowledge it is hardly possible to offer any fruitful insight beyond that which is already obvious. Similarly, without a continuous sustained observation of the phenomenon over a long period, it is almost impossible to test the validity of certain generalizations on the nature and function of corruption.

A number of scholars who have treated the subject in some professional journals have done so as a sideline to their main interests. They did not keep a close watch on the phenomenon within a given country, selected as the concrete case, over a period of some ten or twenty years. The full cycle of corruption requires time to develop before its manifold ramifications can be observed. Ten years ago, Indonesia was already bogged down by corruption at all levels. It was firmly entrenched and received tacit protection

* Extracted from the Monograph "*The Sociology of Corruption*" by Prof. Seyd Hussein Alatas - 1968 - Donald Moore Press Ltd., Singapore.

from those in power. After the unsuccessful 30th September 1965 communist attempt to seize power, followed by the rise of Generals Suharto and Nasution to leadership against the communist-Sukarno united front, more public agitations appeared against corruption.

A new manifestation in the history of corruption in Indonesia was exposed recently. That is the role of banks in the intensification of corruption. Ten years ago this was hardly heard of. What did exist was the corruption of bank officials in the form of commissions (bribery) for a loan obtained from the bank, but with sufficient security. The new manifestation as compared to ten years ago is the active participation of directors of some banks in organizing an illegal banking ring. Their banks issue large loans to clients without sufficient security. On 29th August, 1967, fifteen banks were suspended and prohibited from clearing their cheques until investigation was completed. One of them was a bank for the armed forces. It was reported on 28th August, 1967, that 39,000 dubious cheques were under investigation from three banks alone. One army officer was alleged to have embezzled 120 million rupiahs with the co-operation of a bank.¹ It was subsequently claimed by the official side that only seventy million was involved while the other fifty million was recovered. The officer involved escaped to Holland via Penang, and Interpol was eventually asked to arrest him.

These banks worked by means of unofficial agents whose function was to settle the deal with the party in need of the credit. When a credit, say ten million rupiahs, was effected the borrower had not only to pay a higher rate of interest (the official rate plus the illegal rate for the director, sometimes totalling up to twenty per cent) but also a ten per cent down payment as soon as the amount was drawn from the bank. In a loan of ten million, one million was immediately deducted as bribe for the director. As this practice developed, the bank as a whole had to draw overdraft from the central bank since more and more credits were given in this way.² Not only the banks, but other official or private institutions developed what General Nasution called "dualism"

¹ *Sinar Harapan*, Djakarta, 28th August, 1967. The issue of 3rd September, 1967, suggested the involvement of three parties in this affair, the bank officials, the General and the suppliers. A photocopy of the cheque was printed.

² *Sinar Harapan*, Djakarta, 16th September 1967.

in his written address to the Conference of Muslim Students in North Sumatra on 26th August 1967. After twenty-two years of independence the Indonesian nation has not succeeded in establishing a just and prosperous society. General Nasution feared that corruption would turn out to be the national cancer unless it was mentally and administratively uprooted. He noted the dualism in the budgeting of some official institutions engendered by certain social and operational needs, as one of the sources of corruption.³

In a corrupt society dualism in the activity of the state institutions is most pronounced. In every instance there is the official and the unofficial procedure. Tax assessors visit the home and offer to reduce assessment on remuneration. Admission to the University can be procured through the back door. Licences and permits can be obtained likewise. In almost every official activity there is this dualism.

The problems of corruption have occurred in various forms throughout history and have received the attention of scholars and reformers of the past. The great Chinese reformer, Wang An Shih (A.D. 1021-1086) in his attempt to eliminate corruption was impressed by the two ever-recurrent sources of corruption, bad laws and bad men. As he put it, "But what I wish particularly now to emphasize is that history proves it to be impossible to secure proper government by merely relying on the power of the law to control officials when the latter are not the right men for their jobs. It is equally futile to expect efficient government if, having the right men in their proper positions, you hedge them about by a multitude of minute and harassing prohibitions"⁴ His views on the dynamics and pathology of administration are extremely instructive, and contain much that is relevant to current interest in the problem. He classified human beings into two groups, the morally mediocre and the morally high. Changes of fortune did not affect the latter. The danger comes when the moral mediocrities gain control of government. Their action might then release all sorts of corrupt forces throughout the hierarchy.

³ *Sinar Harapan*, Djakarta, 28th August 1967.

⁴ Wang An Shih, "Memorial of a Myriad Words" (Wan Yen Shu); in H. R. Williamson, *Wang An Shih*, Vol. 2, p. 75. A. Probsthain, London, 1935.

Wang An Shih was no armchair theoretician. He was a very active public figure who once rose to the highest ministerial office of China, and who had a sound diagnosis of corruption. In the last analysis the two absolute pre-requisites against corruption, he believed, were power-holders of high moral calibre, and rational and efficient laws. Neither could function without the other. The one conditioned the other. Both had to be present for any effort to be successful. The modern aim for efficiency and rational goals is evident in Wang An Shih's approach.

Amongst the Islamic scholars, Abdul Rahman Ibn Khaldun (A.D. 1332-1406) should be especially mentioned. He is well known not only as the discoverer of scientific history and sociology, but also as a student of corruption. Like Wang An Shih he was no armchair theoretician. He was an active public figure who rose several times to high office, suffered imprisonment and various changes of fortune. During his appointment as a judge he tried to eliminate corruption and bribery but failed, and was dismissed from office. Ibn Khaldun attempted to explain the causes of corruption, and also why at certain times reformers had failed, and at other times they had succeeded. His insight into the matter is interesting. He considered the root cause of corruption to be the passion for luxurious living within the ruling group. It was to meet the expenditure on luxury that the ruling group resorted to corrupt dealings. The other causes were further effects generative of further corruption.⁵ They were the chain reactions released by corruption. The corruption of the ruling group brought about economic difficulties, and these difficulties in turn induced further corruption.

Between the old and the present studies of corruption in Asia, there has not been any continuity in the development of theory and analysis. Furthermore, the sociology of corruption in general has received relatively little attention from social scientists.

In most instances, reference to corruption is made in connection with other subjects, such as crime or public administration. Many works referring to corruption do not attempt a conceptual and causal analysis. Neither do they attempt to classify

⁵ See Ibn Khaldun, *The Muqaddimah*, vols. 1-3, tr. F. Rosenthal, Routledge-Kegan Paul, London, 1958. (Vol. 2 is of special interest.)

the types and degrees of corruption.⁶ A theoretical enquiry into the roots and function of corruption as attempted by Lasswell and Rogow is not a common phenomenon⁷ - neither is Wertheim's discussion on the sociological aspects of corruption in Southeast Asia.⁸ Before we go any further, we should clarify the term corruption. "According to the common usage of the term 'corruption' of officials, we call corrupt a public servant who accepts gifts bestowed by a private person with the object of inducing him to give special consideration to the interests of the donor. Sometimes also the act of offering such gifts or other tempting favours is implied in the concept. Extortion, i.e. demanding of such gifts or favours in the execution of public duties, too, may be regarded as 'corruption'. Indeed, the term is sometimes also applied to officials who use the public funds they administer for their own benefit; who, in other words, are guilty of embezzlement at the expense of a public body."⁹

Another phenomenon which can be described as corruption is the appointment of relatives, friends or political associates to public offices regardless of their merits and the consequences on the public weal. For the present purpose we shall call this nepotism.

We have thus three types of phenomena contained in the term corruption: bribery, extortion, and nepotism. They are not completely identical, but can be classified under one heading. Essentially there is a common thread running through these three types of phenomena - the subordination of public interests to private aims involving a violation of the norms of duty and welfare, accompanied by secrecy, betrayal, deception and a callous disregard for any consequence suffered by the public.

At this juncture, the description of corruption is not meant to be evaluative. The terms "betrayal", "deception" and "unlawful"

⁶ An instance at hand is B. Noggle's *The Teapot Dome*, Louisiana State University Press, 1962. This is primarily a historical work. As a source of sociological insight it is interesting, although it does not furnish an analysis of the subject.

⁷ H. D. Lasswell and A. A. Rogow, *Power, Corruption, and Rectitude*, Prentice Hall, New Jersey, 1963. This is a stimulating work against the Actonian generalization that power corrupts. It also deals with other aspects of power and corruption of interest to the sociology of corruption.

⁸ W. F. Wertheim, "Sociological Aspects of Corruption in Southeast Asia", in his *East-West Parallels*, van Hoeve, The Hague, 1965.

⁹ W. F. Wertheim, *op. cit.*, p. 105.

are used here in a neutral sense, without judging whether the act as such is good or bad for the particular society, and here again, good or bad as conceived by the society concerned. We shall deal with this later, in connection with the role and effects of corruption in the underdeveloped countries of Asia and Africa.

It is generally admitted that corruption is an age-old problem and that all human societies, except the very primitive, are, to some extent, in varying degrees, affected by corruption. Depending on the degree of corruption, and a set of other conditions, it has been successfully pointed out that the viability and development of a political, social, cultural or economic order, need not necessarily be stultified or thwarted by the mere presence of corruption. Some observers go further and claim that in some instances corruption has helped to promote economic development and efficiency.¹⁰

It has also been suggested that bureaucratic corruption today in underdeveloped countries is either encouraged by or merely continuous with the traditional offering of gifts to those in office or holding certain powers.¹¹ A lag in administrative adjustment in some areas and the persistence of earlier outlooks had contributed to the problem of corruption. As Wertheim described it with reference to Indonesia, "First of all we have to take into account that the post-war forms of so-called corruption still frequently conceal relics of the traditional social structure. Village headmen for example are still unpaid, so that they have to maintain themselves by partly legal, partly illegal levies on the population. The patrimonial-bureaucratic substructure still influences all other sections of society, while traditional family ties continue to clash

¹⁰ For instance, see Myron Weiner, *The Politics of Scarcity*, University of Chicago Press, Chicago, 1962; Herbert J. Spiro, *Politics in Africa*, Prentice Hall, New Jersey, 1962; O.P. Dwivedi, "Bureaucratic Corruption in Developing Countries", *Asian Survey*, Vol. VII, No. 4, April, 1967; N. H. Leff, "Economic Development Through Bureaucratic Corruption", *The American Behavioural Scientist*, Vol. VII, No. 3, November, 1964; Colin Leys, "What is the Problem about Corruption?", *The Journal of Modern African Studies*, Vol. III, No. 2, 1965; and D. H. Bailey, "The Effects of Corruption in a Developing Nation", *The Western Political Quarterly*, Vol. 19, Dec. 1966.

¹¹ "And while traditional gift-giving can be distinguished from a bribe of money, it is quite obvious that from the point of view of the giver the one has shaded into the other, so that although the practice has taken on a new significance, as the open gift of a chicken is replaced by a more furtive gift of a pound note, it is nevertheless an established fact of life, in which the precise nature of the rule-infringement is partially concealed by continuity with an older custom." C. Leys, *op. cit.*, p. 225.

with modern concepts of morality in public affairs. Even as late as 1957 in several public services in Western Sumatra it could be observed that all the personnel in one particular office belonged to a single family group: that of the office chief."¹²

A discussion of corruption may be divided into three problem areas: (a) the function of corruption, (b) the causes of corruption, and (c) the ways and means of eliminating or restraining the influence of corruption. So far no trend encouraging and promoting corruption as an ideal has emerged amongst social scientists. Even those who claimed to see some positive aspects of corruption have not recommended it for development but only tolerated it. It is apparent that there can be no sufficiently fruitful insight into the subject if these three problem areas are not covered at the same time in an analysis, at least at this present stage of enquiry where there is still a lack of conceptual differentiation and methodological caution. The underlying methodological assumptions on social causation, on historical continuity, on the emergence of new cultural values, on the identification and interpretation of social phenomena have to be brought into the area of discourse.

It will shortly be apparent that suggestions on the causes and function of corruption in under-developed countries have suffered from serious methodological shortcomings. The best instance at hand is the claim that corruption has some positive contribution to make for the progress of underdeveloped areas. The first objection we may raise against Weiner and Spiro, and many others dealing with the problem, is that they did not first meaningfully define and differentiate substantially the concept of corruption into the three major types, and then assess its function in terms of each of these. Extortion, nepotism and bribery each possesses a distinct dynamics and phenomenology. Their effects and functions with reference to development differ according to the context of a country's situation and cultural background. If we desire to appraise the functions of corruption in a particular context, we will have to assess each of the three separately. Many observers like Weiner and Spiro, to mention only two, generalise about the function of corruption in a particular country like India, or a particular region such as those in the underdeveloped areas, on data derived from a particular type of corruption. It has been

¹² W. F. Wertheim, *op. cit.*, p. 125.

suggested by Weiner that by bribing the officials the businessmen could get things done which otherwise would have taken a long time, owing to innumerable regulations. "Indeed, the *bakshish* system is not as disruptive as might at first appear. It lends to the administrative system discretion and flexibility (which admittedly are provided by other means in other systems) without which many businessmen would find it difficult to function."¹³ Weiner noted the view of many businessmen that if government were to impose all the regulations, business and economic growth would come to a grinding halt. He appeared to endorse this view when he said, "On the other hand, we have tried to suggest in our study that efforts to influence local administration, even through widespread corruption, are not wholly detrimental to political, and perhaps even to economic, development."¹⁴

As a statement of fact limited to the type of corruption concerned, there is no disagreement with Weiner.

Without denying the fact that such a type of corruption does act as a promoter of efficiency in this particular context, the fact is not of great interest for planning or research, for the simple reason that it belongs to that category of findings which is obvious. It is a known fact that the expansion and sophistication of criminal activity has, in several instances, increased the efficiency of the police, just as it is a fact that the miseries suffered by countless victims of cancer have helped cancer research. Such a view-point is not of much use since almost everything happening under the sun can be said to be positive in some way. We are more interested in the total context, the context of a society which has made graft "the oil that makes the administrative machinery operate quickly". It is when we consider graft in the total context that we get a different picture of the function of extortive corruption. The following examples can be observed by anyone who has the time and patience to look out for the effects of extortive corruption:

- (a) the infinite frequency of graft transactions involving countless millions of dollars and hundreds of thousands of business decisions in the underdeveloped areas becomes

¹³ Myron Weiner, *op. cit.*, p. 121.

¹⁴ Myron Weiner, *op. cit.*, p. 235. Weiner recognised the detrimental effect of corruption but saw it as not altogether detrimental, as the above passage indicates. He notes other effects of corruption with reference to other problems.

a burden to the public, since the cost of graft is eventually passed on to the consumer. Where there is no effective price control the manufacturers and businessmen always attempt to transfer the burden of legal taxation to the consumer. The same holds true of graft, which is a kind of illegal taxation.

- (b) Though graft helps to promote efficiency in particular cases, it tends to lower the efficiency of the civil service as a whole. In an office or a department riddled with corruption, the efficiency norms of the bureaucracy have always to be subordinated to the norms of the graft ring. Efficient and honest civil servants have been known to be transferred or blocked from promotion if their presence or promotion affects the interest of the ring.
- (c) In actual practice, extortive corruption is a phenomenon which tends to spread rapidly, bringing along with it negligence and inefficiency. It is never restricted to one form. The habit of doing something illegal and subversive becomes transferred to wider and wider circles, unless effectively restrained. The type of bribery alleged to promote efficiency has the tendency to develop and extend the habit in areas where it is difficult to promote efficiency.
- (d) Corruption undermines respect for the constituted authority. This in turn leads to all sorts of problems. It tends to deprive a government of public support, and alienates public devotion to government's aims.

Furthermore, such bribery is not always effective. Within the context of corrupt relationships, there is also competition based on corruption norms. Those who pay most are not always the ones who succeed. The trustworthiness of the bribe-giver, the extra favours he could offer, like providing girl friends, or facilities for holidays, or some kind of assistance, may determine the receptiveness of the officials. We have seen that conclusions derived from one type of corruption cannot be made the basis of a generalization on corruption in general. It is also apparent that in actual practice, it is difficult to suggest the effect of extortion on efficiency as isolated from its effect on other types of corruption and the total context.

Those who suggest the positive function of corruption in underdeveloped areas, apart from ignoring certain dimensions in contextual analysis, have also been guilty of a bias in their selection of data. There are some descriptions of certain countries in Latin America, which can also be applied to some Asian countries I know from experience. These data are often ignored or missed by those who suggest some positive function of corruption. People fear the police and their extortions, of which the most common form is the imposition of fines for fictitious offences, the money going to the policemen. In some countries, the ordinary people regard the police as extortioners or uniformed bandits. In most countries the clerks have to be bribed to deal with the innumerable formalities, failing which, they attend to the matter with deliberate delay or not at all. Customs inspectors derive most of their income from bribes. In a particular Latin American country they damaged or delayed goods of people who did not offer a bribe. Furthermore, there is the distribution of contracts to those who will reserve a cut for the ruling cliques. Two of the Latin American presidents had directly appropriated US \$700 million and US \$400 million respectively. One deceased dictator had amassed an amount exceeding US \$ 1,000 million.¹⁵

During the years following the terrible earthquake of May, 1960, Chile received US \$ 120,000,000 from the United States as aid for the victims. By October, 1961, out of 40,000 homeless only 3,000 were rehoused "which would make it appear that it costs many thousand dollars to build a peasant's hut".¹⁶ Blankets, foodstuffs, and other materials sent to Peru for the victims of earthquakes and floods found their way into the shops of Lima and elsewhere.

When the total effect of corruption on afflicted societies, whether in the economic, administrative, political or judicial realms is considered, no stretch of sociological imagination could ever succeed in suggesting that it has some positive function in development, except in the development of exploitation, inequality, and moral and legal disorder. I will here cite Andreski's conclusion on the nature of corruption: "The losses caused by corruption far

¹⁵ The above data on Latin America are derived from an excellent and stimulating study: Stanislaw Andreski, *Parasitism and Subversion*, Weidenfeld and Nicolson, London, 1966.

¹⁶ S. Andreski, *op. cit.*, p. 67.

exceed the sum of individual profits derived from it, because graft distorts the whole economy. Important decisions are determined by ulterior and anti-social motives regardless of the consequences to the community. When a useless factory is built in an impossible place simply because the former owner bribed the officials into buying it for an exorbitant price, then the cost to the community must far exceed the profits of the manipulators. An administrative machine permeated by graft does not respond to direction, so that even a most enlightened cabinet or president can achieve nothing, and his instructions are perverted in execution. The network of collusion is so thick that an honest president, even one as energetic as Gardenas, gropes in a fog. Every bureaucratic machine suffers to some extent from an antipathy towards initiative and originality, from sycophancy and from the preferment of intriguers and yes-men. But when graft is added to these disorders, the machine ejects all the incurably honest men, selects for promotion the most ruthless and astute rogues, and compels the rest to follow their example.¹⁷

Those who suggested some positive function of corruption did not link their analysis with the different stages of corruption, which is essential to the validity of their generalisations or suggestions. When we declare that corruption has some positive function, what stage of corruption do we have in mind?

Broadly speaking we may divide corruption into the following three stages:

(a) the stage at which corruption is relatively restricted without affecting a wide area of social life. In this stage we can accomplish without hindrance and extortion almost all our dealings with the government in most of our routine affairs. Rights and regulations are implemented without public suffering. Almost everything the public requires from the government can be obtained without recourse to graft or nepotism. At this stage corruption is restricted to a section of the upper circle in government and in big business.

(b) The second stage is where corruption has become rampant and all-pervading. There is hardly anything anyone can do without graft. I shall illustrate this with the case of a Southeast Asian country which has been literally ruined by corruption. I had the

¹⁷ S. Andreski, *op. cit.*, pp. 67-68.

good fortune to note this from direct observation and have spent several years in the country through all the different periods of political change, — the colonial rule, the Japanese occupation, and independence. From the time of the Japanese occupation up to the present day, twenty-five years have elapsed. During this period, corruption has steadily increased. Ten years ago, when I was in the capital of this country, there was hardly anything one could do without either graft or influential connection.

Tickets for air and rail travel were sold on the black-market. A certain number of train tickets were sold regularly but the rest went to the black-market. Bookings on local air flights were always full and to the amazement of those who bought black-market tickets, there were often a number of empty seats on a plane. The telephone system was not automatic, and the operator had to be bribed. The postman had to be given a monthly *bakshish*. The office boy had to be tipped in advance to deliver a letter to his boss. The stamp counter at the post office claimed never to have small change as prices of small commodities are numerically big. One could not pass a driving test without rewarding the police examiner. Thousands of households, including the one in which I stayed, had to pay protection money to certain secret societies in order to buy security from their attack and protection from attack by rival groups. The police however were not concerned. The fire brigade did not always respond to an emergency. The garbage collector would leave the rubbish alone if he was not properly tipped. Even colleagues in the same department had to resort to bribery. Thus in the foreign ministry the officer in charge of accommodating returning members of the diplomatic staff to the home office expected bribes from less powerful colleagues.

(c) The third stage of corruption is the most interesting, and at times difficult to notice. This is when corruption becomes self-destructive, having destroyed the fabric of society. To further our theory of the dynamics of corruption, we must here include its interplay with other factors. Corruption alone is not responsible for its destructive effects. We must also include here the cause and effect relationship of corruption: Corruption stimulates further development of greater corruption, and this further degree in turn causes an even greater increase in corruption. When extortion becomes widespread in the civil service, and is used by

policemen on the beat, the clerk at the counter, and the nurse at the hospital, it is usually the effect of previous corruption at a higher level. For a country's condition to generate widespread corruption amongst the civil service, it requires that a preceding state of corruption be present and responsible for that condition. A theory of corruption has to include this initial condition.

Usually the succession from the stage of restricted corruption to the stage of widespread and deep-rooted corruption starts with the group which is least hampered by economic difficulties affecting means of subsistence. This is the group of high officials and well-to-do businessmen. When corruption in this circle has gone on for some time, society will then feel the effect. The state revenue declines out of proportion to the volume of trade and taxable sources. The currency declines in value, and prices go up. When this happens, the lower levels of government officials have recourse to corruption in an effort to maintain their livelihood. But this general economic difficulty is generated by the corruption of the economically higher classes. There are many interesting variables here, which in their turn determine whether the corruption of the upper and influential classes will generate conditions for general corruption. Those who suggest some positive function in corruption base their analysis on this stage of corruption, and that is done only within the area of extortive corruption. They do not proceed to the next stage, which is when corruption becomes destructive not only of society, but also of those practising it. There are a few countries in the underdeveloped areas going through this process.

It has also been suggested that corruption can act as a hedge against bad policy. "Even when the government of an underdeveloped country is proceeding actively and intelligently to promote growth, there is no assurance that its policies are well-conceived to attain its goals. In effect, it may be taking a vigorous step in the wrong direction. Corruption can reduce the losses from such mistakes, for while the government is implementing one policy, the entrepreneurs, with their sabotage, are implementing another. Like all insurance, this involves a cost — if the government's policy is correct. On the other hand, like all insurance, it is sometimes very welcome."¹⁸

¹⁸ N. H. Leff, *op. cit.*, p. 11

As the above extract shows, the author qualifies the validity of his suggestion by "may" and "can". To support his suggestion he cites the example of Argentina and Chile. But Argentina and Chile have been corruption-riddled countries, with deep historical roots in corruption. The sabotage of Peron's economic policies by graft from agricultural producers is alleged to have had beneficial effects on Argentina's capacity to import.¹⁹ The sabotage of Peron's policies is not analysed within the context of an already developing corruption. "Corruption, always rampant in Argentina, reached fabulous proportions under Peron, when large parts of the economy came under governmental control. The traffic in permits and appointments was enormous."²⁰ To sabotage Peron's policy through graft and to succeed is analogous to gang warfare with the victor possibly being capable of doing less harm to the public. Within this context, of course, it is an advantage. The exact situation should be defined as a relatively honest but bungling government being sabotaged by graft, the success of which leads to public advantage. However, such a viewpoint has never been put forward. The argument in favour of corruption as a means of sabotaging bad policy is, in my opinion, without convincing foundation.

This is not to deny that, within an already corrupt political and historical context, differences in policy can have consequences which are positive or negative. There is still a gradation in the degree and effect of corruption. To return to the case of Peron and his fatal policy of instituting government monopoly on agricultural produce, fixing uneconomic prices, and simultaneously preventing the import of goods required to maintain productivity, his government did succeed in causing food scarcity in a country abundant of food. The aftermath of this policy is still felt in Argentina many years later. In the case of Argentina, like some other underdeveloped countries, it was a combination of administrative inefficiency, incompetent planning and corruption. In fact the three are often found together. To what extent each contributes to the total crisis of developmental strain and stagnation, requires a special investigation which has never been undertaken.

¹⁹ Neither the details nor the source were given of this instance. Other instances were referred to an expert in Latin American economic development, probably through personal contact. See N. H. Leff, *op. cit.*, pp. 11-12, and note 7, p. 14.

²⁰ S. Andreski, *op. cit.*, pp. 230-231.

The point of interest to us here is Andreski's evaluation of Peron's rule. "He raised the self-respect of the workers, helped them to organize themselves, extended facilities for free education, introduced social insurance and other measures of public assistance. Had he not squandered money on arms and ostentation, had he been an efficient and honest administrator, he could have put Argentina among the prosperous and stable societies."²¹ "In addition to dislocating the economy, his rule aggravated the corruption and inefficiency of the administration; it stimulated appetites whilst reducing the means of satisfying them."²²

Many countries in Asia and Africa have had similar experiences, in the sense of a combination of corruption, inefficiency and bad planning. Improvement lies in the decrease of all these, as far as national development is concerned. To suggest the toleration or encouragement of corruption would impede development, however unavoidable corruption may be within particular contexts of action.²³ The need to overcome bureaucratic hurdles and numerous regulations of the kind noted by Weiner, though genuine, does not plead for the positive function of corruption. It should rather be seen as the expansion of corruption, for to some extent, corruption contributes to the enormous increase of rules and delays, and ostentatious projects that would benefit the corrupt power-holders. We also have to bear in mind that the inability of an administration to perform efficiently, in the fact of an increasing number of rules and regulations, is partly contributed to by corruption, while the administrative lag in performance contributes to the corruption cited as instances by Weiner and others.

In many underdeveloped countries we can notice the simultaneous occurrence of three trends, i.e. expansion of the civil service, increase of rules and regulations, and decrease in reserve revenue. All three may be determined to a large extent by the need to implement development projects. But already at the earliest stages, before the projects are even conceived of and

²¹ S. Andreski, *op. cit.*, p. 231.

²² S. Andreski, *op. cit.*, p. 231. The details on Peron's economic policy, in preceding paragraphs, are also derived from here.

²³ See O. P. Dwivedi, *op. cit.*, pp. 251-253. The author suggests some positive influences of corruption, one of which is what he calls universalistic bribery advocated to replace ascriptive corruption.

approved, corruption has emerged in a form which affects the revenue, with or without the prolific multiplication of rules. Whether there is expansion of government activity or not, corruption is there and it expands with governmental expansion. From which ever point of view we look at it, it does not contribute positively towards development, for a part of government funds is continuously drained for negative purposes. In the last analysis, the function of corruption is comparable to a disease; if well under control, harmless, if not, deadly.²⁴

We may now turn our attention to the causes of corruption. It has been suggested that corruption has been brought about by the following factors: (a) The absence or weakness of leadership in key positions capable of inspiring and influencing conduct mitigating corruption. As the Chinese and Japanese proverb says, "As the wind blows so bends the reed." (b) The weakness of religious and ethical teachings. (c) Colonialism. An alien government does not awaken the necessary loyalty and devotion capable of inhibiting corruption. (d) Lack of education. (e) Poverty. (f) Absence of severe punitive measures. (g) Absence of environment conducive to anti-corrupt behaviour. (h) Structure of government. (i) Radical change. Whenever a value system is undergoing a radical change, corruption appears as a transitional malaise. (j) The state of society. Corruption in a bureaucracy reflects the total society.²⁵

Although the above factors are the constituent elements in the occurrence of corruption, yet by themselves, these factors are not sufficient to explain the phenomenon. In his stimulating study of this problem, Braibanti has accumulated some concrete arguments against invoking them separately as an explanation of corruption. As he puts it, "Their importance lies in the fact that they are but elements in a complicated matrix of causes, each of which are of varying importance, depending on spatial, temporal and circumstantial factors."²⁶

²⁴ S. Andreski, *op.cit.*, p. 69. "It must be remembered, however, that just as a body can tolerate a certain number of bacteria without suffering much harm, but succumbs to them once the white corpuscles can no longer keep them in check, so a society which can withstand sporadic graft suffers severe deformations once it becomes brazen and widespread.

²⁵ For a further detailed discussion, see Ralph Braibanti, "Reflections on Bureaucratic Corruption", *Public Administration*, Vol. 40, 1962.

²⁶ Ralph Braibanti, *op.cit.*, p. 358.

The idea of the personal influence of leaders concentrically radiating virtue like pebbles causing ripples to the edges when dropped into a pool of water, inclines towards a highly optimistic view of human nature. In simple tribal society the influence radiating from the leaders may reach the followers directly without involving a network of complex factors of transmission. "But in large, complex organisations, the virtue of the leader is not enough. The pristine quality of the image of his virtue is too easily tarnished and even eroded by the complexity of his indirect relations with his subordinates."²⁷ There are several historical instances of good leaders with bad governments, and bad leaders with good governments.

The other factors noted are, on examination, similarly inadequate. Here we shall restrict our discussion to one social factor alleged to have contributed to corruption. This is the suggestion that underdeveloped traditional societies contain the institution of the gift which easily shades into corruption.²⁸ That this may happen need not be denied. What can be refuted is the tenability of the claim that this practice is one of those significant determinants of corruption arising from within the traditional context.

The exaggerated significance given to the gift institution and the role of traditional family ties should be re-examined in the light of contextual and historical analysis. If they were so dominant, it is baffling how certain Western countries have succeeded in restraining corruption despite the fact that socially approved traditional practices, theoretically vulnerable to an invasion by corruption, are still upheld. A valid explanation could be the breakdown of the feudal order and the rise of an impersonal and rational conception of the social order, supported by certain types of social change and social classes. But here this explanation breaks down. Within the context of the modern social order, and the familiar set of sociological factors invoked to explain the phenomenon as noted earlier, there has been the same process of expansion and contraction of corruption found in pre-modern society. The history of corruption in the United States is a convincing proof that corruption is not correlative with either pre-modern or modern

²⁷ Ralph Braibanti, *op. cit.*, p. 358.

²⁸ See an earlier reference in this paper to the views of Lays and Wertheim. For Spiro's view see his book, *op. cit.*, p. 103.

conceptions of the bureaucracy, family ties, civic consciousness, the gift institution, or governmental ethics.

Furthermore, it is not true to presume that the demarcation line between corruption and proper conduct in underdeveloped societies is hazily drawn. If we take the Buddhist, Hindu or Islamic societies, we shall discover that there is a strong awareness and condemnation of corruption derived from the distinction between public and individual rights, and between right and wrong. Here I will give examples from Islamic history, with which I am more familiar. Let me cite first the Quran, on the subject of bribing judges. "And do not eat up your property among yourselves for vanities, nor use it as bait for the judges, with intent that ye may eat up wrongfully and knowingly a little of (other) people's property."²⁹ The Quran insists that trustworthy people should be put in command, and that hatred or dislike for a party must not impede the execution of justice.³⁰

Imam Ahmad ibn Hanbal (A.D. 780-855), the founder of one of the great schools of thought in Islam, was well known for his uncompromising attitude towards corruption and the abuse of power. He was beaten and imprisoned by the Caliph Ma'mun for refusing to agree on some theological points. He abhorred the post of judge, and resented receiving presents from the palace so much, that he severed communication with his sons for two or three months because they secretly accepted gifts and money from the Caliph. During his lifetime and even after his death he exerted a great influence on the Muslim world, and was revered by both Christians and Muslims during his lifetime.³¹

The most important factor in the dynamics of corruption is the moral and intellectual stature of the leaders of the society. This suggestion should not be understood in the naive sense. The moral and intellectual stature of the leaders becomes decisive and crucial within the configuration of other conditions. This

²⁹ Abdullah Yusuf Ali (tr. ed.), *The Holy Quran*, Ashraf, Lahore, 1938, Vol. 1, 2:188, p. 74-75.

³⁰ Abdullah Yusuf Ali, *op. cit.*, 4:58, p. 197-198, and 4:9, p. 243.

³¹ W. M. Patton, *Ahmed ibn Hambal and the Mihna*, Brill, Leiden, 1897. "He had a profound dislike to the receiving of money assistance from others, and took very little pains to secure money for himself. His happiest moments were those when he was left without a coin in his purse." pp. 178-179.

factor has been noted by other students of corruption. What we are concerned with, here, is defining the pattern of relationships between the various conditioning factors of corruption, and to locate the position and function of leadership within that pattern.

We may note the following conditions which mitigate corruption, even if they do not effect an abolition: (a) a positive attachment to the government and a spiritual involvement in the task of national progress from both the public and the bureaucracy.³² (b) Efficient administration and proper structural adjustment of government machinery and regulation so as to avoid the creation of sources for corruption. (c) Favourable historical and sociological conditions. (d) The functioning of an anti-corruption value system. (e) The inspiring leadership of a group with high moral and intellectual standards. (f) An educated public with sufficient intelligence to appraise and follow the course of events.

As regards the influence of government on the spread of corruption, the following factors are clearly contributive: (a) when government lets huge contracts containing terms which can bring fortunes to contractors. (b) When it collects very large sums of taxes, hence offering temptations for bribes in exchange for tax reduction. (c) When it fixes rates for certain industries such as railroads, electricity and gas, as well as prices for a wide range of commodities. This leads to the dominant firms trying to control the rates and prices. (d) When it exercises power to select who shall or shall not enter into an industry, as in the case of radio, television, interstate trucking, and aviation in the United States. (e) When it grants loans or permits for plants or equipment to be redeemed out of taxes over a short period of time. (f) When it possesses power to allocate raw materials. (g) When government subsidies are paid either openly or covertly.³³

The above then are the potentially corruption-fraught areas of government activity. All the factors we have so far discussed are not in themselves operative unless there is a sufficient number of individuals who seize an opportunity for corruption. Within the

³² W. F. Wertheim, *op. cit.*, p. 130.

³³ P. H. Douglas, *Ethics in Government*, Harvard University Press, Cambridge, Massachusetts, 1952, pp. 22-23.

configuration of these factors, the moral calibre of the individuals concerned is decisive. Similarly, no structural and legal changes in government administration designed to fight corruption will succeed, unless there is a sufficient number of individuals of high principles occupying key positions vital to the success of the effort.³⁴ The problem for a society desiring to get rid of corruption is precisely how to ensure a sufficient supply of such men and how to facilitate their rise to the vital positions.

During the era of the "muckrakers" in America, the pioneers against corruption were men infused with a certain amount of idealism, courage, an intense hatred for injustice, a critical attitude towards the existing order, an optimism for success, and confidence of the power of reason and justice. The role of these men in changing the morality of the period must not be underestimated. In Britain, for instance, there was never a period in the whole history of corruption in that country when there were no powerful forces fighting against it. The change in the historical and sociological context which discourages corruption can be translated into a living force only if there are effective and influential individuals to act as the catalyzing agents. In the absence of such a group, corruption will obviously continue to thrive. How to ensure a society's steady supply of these individuals and to facilitate their rise to vital positions is always a central problem. Unfortunately sociology has hardly devoted any attention to this problem. Sociological and political studies of leadership, though fruitful in other aspects, have not significantly explored the area of corruption within ruling groups.

The point I wish to stress here is that since some attention has been devoted to the general causes and conditions of corruption as well as its effects, and since a great deal of existing findings can be accepted as valid, through explanation from historical, political, economic, sociological and anthropological analyses of corruption,

³⁴ Chu Cheng-po, in his memorial submitted in 1895 after China's defeat by Japan, emphasized the basic weakness, the incompetence and venality of officials. He said, "In the present world our trouble is not that we lack good institutions, but that we lack upright minds. If we seek to reform institutions, we must first reform men's minds. Unless all men of ability assist each other, good laws become mere paper documents; unless those who supervised them are fair and enlightened, the venal will end up occupying the places of the worthy." W. T. de Bary, Wing-tsit Chan, B. Watson, *op. cit.*, p. 737.

we need not remain within the hitherto existing radius of explanation. We can extend our radius to include what has been neglected up to now. This is the influence of charismatic and sacral personalities in the daily life of the masses. In Asia, for instance, we can still rely on functioning traditional institutions for the creation of such personalities.

These saintly and charismatic religious personalities have been the most important single factor mitigating corruption throughout Asian history, during periods when no other resistance was available. They did not strive for power or wealth, and hence, their positions amongst the masses were strengthened by their disinterestedness. Whether it is in Islam, Hinduism or Buddhism, these people were those who kept alive the tradition of organizing thought and action in terms of impersonal, universal, and achievement-oriented values. It is not true to say that all Asian tradition is ascription-oriented. There is a mixture of both orientations, but in terms of bureaucracy the Asian societies developed more on achievement-oriented values.

It is true that the goals of achievement have not always been identical with those of the modern West, but these goals have not been strictly essential for modernization. The essential goals of modernization, such as efficiency, rationality, sustained effort and hard work, constitute the Asian value system just as much as filial piety, religious devotion, kinship solidarity, etc. The difference between Asia and the West in historical development were caused by factors more significant than the value systems of their bureaucracies. One of the most traditional and feudal bureaucracies, namely, Japan, subsequently became a significant agent of modernization. If this feudalism and bureaucracy were completely devoid of achievement goals it would hardly be possible for Japan to transform itself into a modern, efficiency-oriented, industrialized society. It is a known fact that the modernization of Japan was initiated from above. The bureaucracy and the feudal lords played an active part in it after the earlier conflict with the feudal opposition section was resolved.

In a different social setting in which factors found in the Japanese configuration are not present, as, for instance, in many underdeveloped countries, the sacral personalities have yet a role to perform. The influence of revered leaders on development has always inclined to the positive.

The governments of underdeveloped countries should make greater efforts to spread the influence of these personalities through schools and other institutions. They should also disseminate information of past efforts against corruption as developed within their traditional culture. Attempts of this sort should be considered as additional reinforcements to other means adopted in the fight against corruption, given that the goal is to achieve a just and equitable society. Because of the fact that such holy personalities can speak directly to the masses in familiar terms, their effectiveness is much greater than a dry philosophical discourse on justice. No great moral achievement in history has ever been accomplished by men whose source of inspiration is only what is provided by formal education. Great changes in history have been accomplished by men who have been inspired by other men. Whether it is the French Revolution, the American Revolution, the Russian Revolution, or the rise of the great religious civilizations, the inspiring influence of charismatic individual personalities transcending their times and places, has always been the single decisive factor within a historical context.

It was sacral personalities like Mahavira, Buddha, Christ, Mohammed, Nanak, Kabir, Ramakrishna, and numerous others, who inspired the scholars and sages to unceasingly maintain ideals of rectitude. It would be a great mistake to ignore their contribution and their relevance to contemporary problems of restraining corruption in underdeveloped countries. Those aspects of their teachings touching upon corruption should be emphasised, if the governments of the underdeveloped countries are really concerned with the problem of eliminating corruption and employing all means at their disposal against it. In the light of a contextual and historical analysis, it appears that the Asian traditions contain values and articulate trends against bureaucratic corruption as well as other forms of corruption. It also reveals a certain degree of awareness as to the causes and function of corruption. Some Asian observers have been quite perceptive on the problems which we face now.

SELF-HELP CITY: URBAN HOUSING

C. M. CORREA

In most Indian cities today there is a staggering shortage of housing. The Government itself estimates the figure to be almost twelve million units in these urban areas. How can we cope with this back-log, at a price which society can afford?

Now there are 4 principal determinants of cost in housing units:

- (a) The cost of the units themselves.
- (b) The cost of the service infrastructure (i.e. roads, water supply, sewage lines, electricity, etc.)
- (c) The mass transport system (different land-use patterns necessitate different transport networks, and the costs of these – both capital and running – can vary dramatically).
- (d) The social infrastructure (schools, shopping, community facilities etc.)

Let us begin by examining the first element, viz. the cost of the units themselves. If we determine that the minimum dwelling unit should consist of a room, a kitchen and a bathroom, then we need to provide a carpet area of at least 200 sq.ft. In a multi-storeyed building, either walk-up or high rise, the efficiency will be at the most 80% (approximately 10% goes in wall thickness, and 10% in circulation); so that for a carpet area of 200 sq.ft. we will need a built-up area of 250 sq.ft. At today's cost of approximately Rs. 25/- per sq.ft., this totals over Rs. 6,000/- per dwelling unit.

Alternatively, if we consider this figure too high, then we can reduce the basic dwelling unit to a single room (of say 100 sq.ft. carpet area), in which both living and cooking is done. In addition

there will of course have to be common bathrooms and lavatories shared by several units. In this case, the cost of the unit will work out to approximately Rs. 3,599. However, hygiene and privacy within the unit may well be sub-standard; as also the state of the common lavatory facilities.

Yet even if we take this single room unit, the cost of twelve million units, at Rs. 3,500 per unit, works out to Rs. 4,200 crores, viz. something beyond our resources, both in terms of rupees and in terms of the building capacity of the construction industry. Furthermore, a capital investment of Rs. 3,500 would necessitate a rental of approximately Rs. 30/- per month which will be more than double the rent - paying capacity of the families involved.

This then is the first cruel fact about housing in our cities today: namely that we are not able to bring the price of the dwelling unit itself down to a level which either the government, or the people, can afford - and we have not yet counted the cost of the other three factors, viz. the service infrastructure, the social infrastructure, and the transport network.

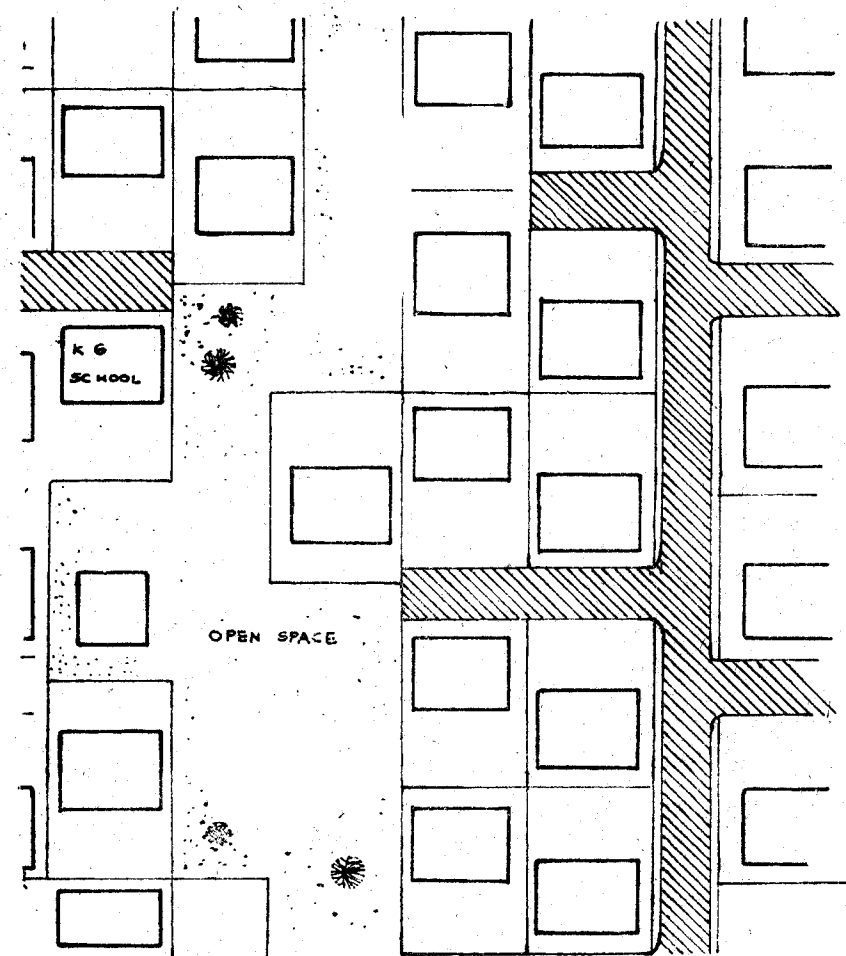
Yet if we look at houses in the villages, we find that a mud structure of 200 sq.ft. can readily be built for as little as Rs. 200/- (i.e. Re. 1/- per sq.ft.). Then again, if we examine the simple houses which exist in small towns in Udipi and other parts of the country, we find that a structure of brick set in mud mortar, topped by a roof in country tiles, need not cost more than Rs. 8/- to Rs. 10/- per sq.ft. In this kind of individual unit the efficiency is as high as 90% (10% is lost in wall thickness; there being no deduction for circulation) and a carpet area of 200 sq.ft. can be built for Rs. 2000/-. Alternately, a room of 100 sq.ft. can be built for as little as Rs. 1200/- including the cost of common toilets.

Thus we find that there *exists* in this country, in fact there has *always existed* in this country, solutions at a price which the people can afford. In other words, we do not really have a problem of *low-cost housing*; what exists is a problem of *land-use planning*. To put the question precisely: can we pack these individual units close enough together so that land is not wasted, and in such a manner that the other three factors in the equation, viz. the service and social infrastructure, and the transport facilities, do not become inefficient and expensive?

Let us now look at the cost of the service infrastructure. (i.e. roads, etc.). If we take a typical multi-storied housing layout (figure 1) we find that the cost of this infrastructure works out to approximately 20% of the total construction cost, that is to say,

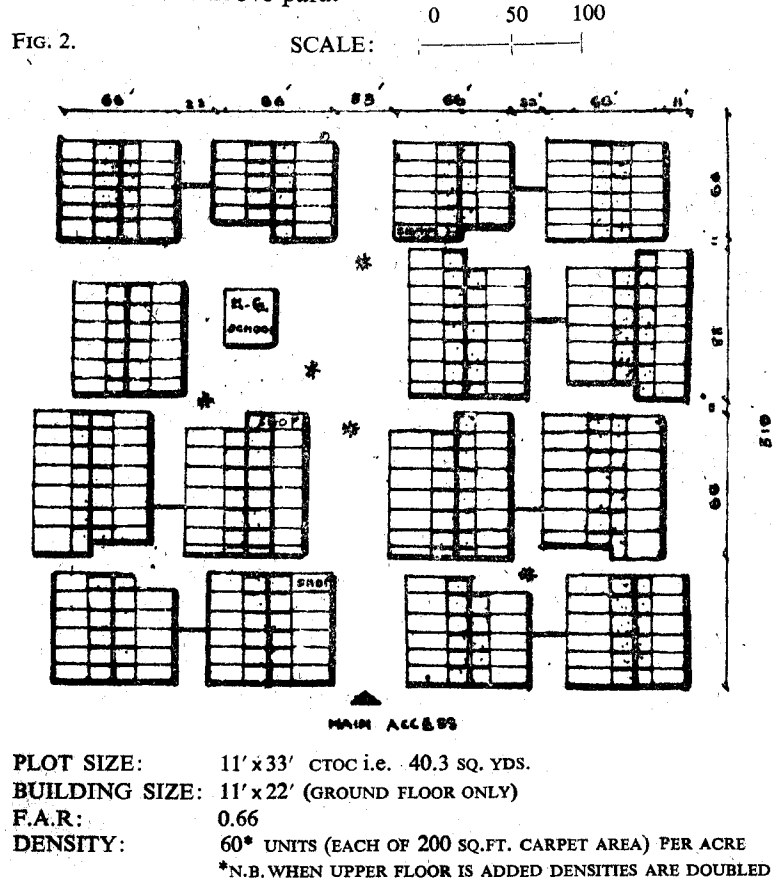
FIG. 1.

SCALE:	0 50 100
PLOT SIZE:	70' x 100' i.e. 778 SQ. YDS.
BUILDING SIZE:	55' x 45' (GROUND + 3 UPPER FLOORS)
F.A.R.:	1.4
DENSITY:	132 UNITS (EACH OF 200 SQ.FT. CARPET AREA) PER ACRE



the component of infrastructure adds Rs. 5/- per sq.ft. to the building cost of Rs. 25/- per sq.ft., the total coming to Rs. 30/- per sq.ft.

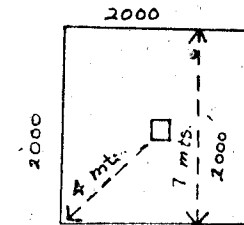
Now if we examine a land-use plan involving only row-houses (figure 2), we find that the infrastructure component rises to approximately Rs. 8/- per sq.ft. However, this increase is more than offset by the saving in the construction cost of the units themselves. In fact if the housing units are constructed out of mud, the total cost will be Rs. 9/- per sq.ft. (i.e. Re. 1/- plus Rs. 8/-). If the units are constructed of brick in mud mortar, with a roof of country tiles, then the cost will be Rs. 18/- per sq.ft. (Rs. 10/- plus Rs. 8/-). Both these figures are considerably below the cost of Rs. 30/- calculated in the above para.



Now let us look at the factor of transport. Mass transportation is essentially a linear function. It really becomes viable in the context of a land-use plan which develops corridors of high-density demand. You cannot, almost by definition, have an economic mass transport system to serve the diffused sprawl of Delhi or Los Angeles. Can we develop sufficiently dense corridors in row-housing patterns?

Let us imagine an area 2000 ft. square (figure 3). At a walking speed of 3 to 4 m.p.h. it will take a pedestrian approximately 7 minutes to walk the length of the square, and 3 to 4 minutes to reach its centre, from the furthest point.

FIG. 3.



Now if we look again at figure 2, we find that for units of 200 sq.ft., we can easily attain densities of 300 persons per acre. This figure includes kindergarten schools, local shopping etc. It does not include primary and secondary schools and district shopping. However, these can easily be located in a secondary belt parallel to the housing - figure 4.

Within this square we have approximately 90 acres. At this density of 300 persons per acre we will have $90 \times 300 = 27,000$ people within 3 to 4 minutes walk of the central bus stop (figure 4). This is large enough to sustain an economic bus system. Furthermore, if a chain of these centres is linked to a heavy-duty rapid transit facility, (figure 5), then we have a logical hierarchy of transport systems and a high degree of mobility to every city dweller even the poorest. Since mobility means job-choice, this is one of the primary objectives of any urban planning effort).

FIG.

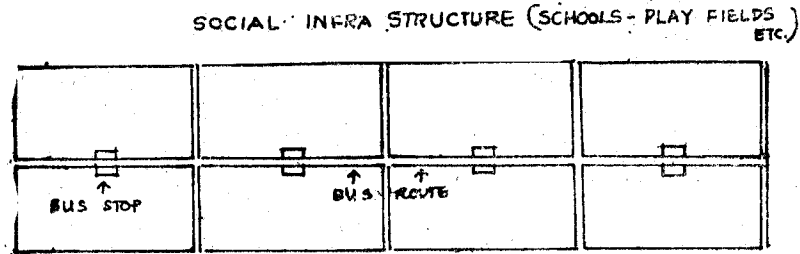
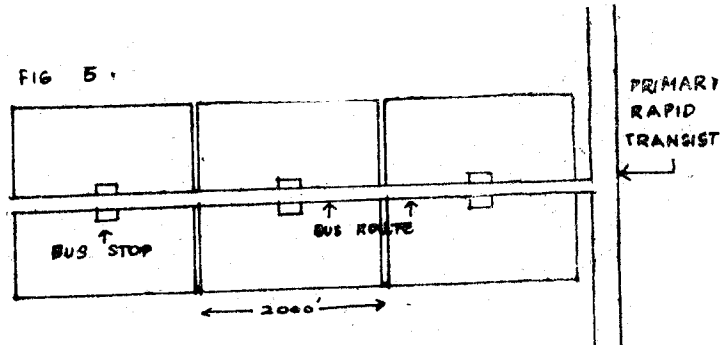


FIG 5



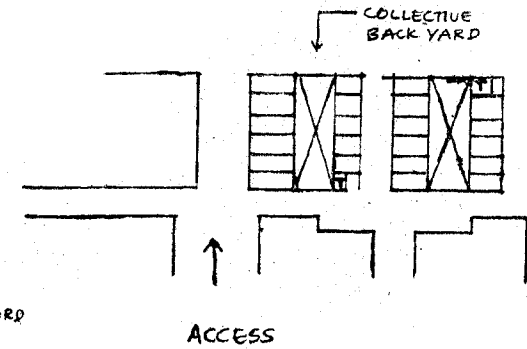
Now let us consider the social infrastructure (schools shops, etc.). The placing of these facilities depends both on the number of people, and on the walking distances; and the density pattern outlined in the paragraph above and in figure 4, places enough people within easy walking distance to make for an economic disposition of this infrastructure.

Thus we see land-use planning using individual dwelling units can generate a viable mass transport system; the additional cost of service infrastructure being only a fraction of the considerable saving in building construction costs. The individual dwelling has several further advantages, to wit:

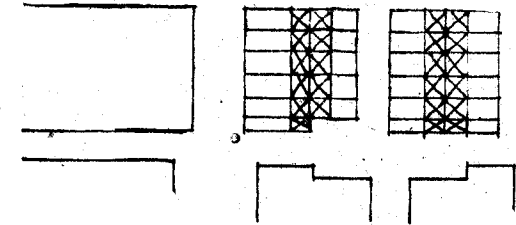
FIG. 5

CO-OP OF
22 MEMBERS
SCALE 1" = 100'

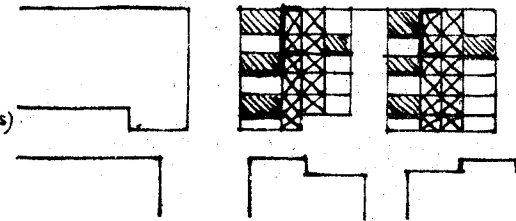
STAGE I
COMMON TOILET IN
COLLECTIVE BACK-YARD



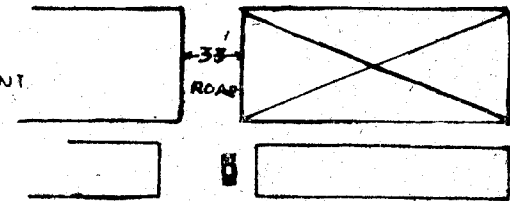
STAGE II
INDIVIDUAL TOILETS



STAGE III
SOME UPPER
FLOORS
(DENSITY INCREASES)



STAGE IV
RE-DEVELOPMENT
AS COMBINED
PLOT



- (a) It has great variety, since the individual owner can design and build it according to his own needs.
- (b) It can grow with the owners requirements and his earning capacity. Eventually, the owner may want to add an additional floor or two, either for rental or for his grown-up children's families. This would have the additional advantage of increasing the housing densities.
- (c) It will make for speedier housing construction since an individual building his own house is a highly motivated person; he will tap resources otherwise unavailable. Apartment houses on the other hand usually involve a minimum outlay of at least Rs. 2 to 5 lakhs a figure, which paralyses the vast majority of our citizens.
- (d) It need not use high-priority construction materials. Multi-storey buildings must of necessity use steel and cement – commodities which are in excruciatingly short supply. On the other hand, the individual row-house can be constructed out of anything from mud upwards. The recent advances in paper technology open up a world of new possibilities. Asian cities could well consist of low-rise high-density paper houses, each with its own private open-to-sky court-yard. And of course this solution already exists in Tokyo. The only difference being that today a rational hierarchy of transport systems could be built into the pattern right from the beginning.
- (e) Of course if the house in its early stages is constructed of brick, mud and country tile, then it will not have a life span of more than 10 or 15 years – as compared to a Reinforced Cement Concrete structure which will have a life span of, say, 70 years. But this impermanence is really an advantage. For after 15 years, when our economy improves, we will presumably have more resources to deal with this problem of housing. To build slums, permanent slums which last 70 years (as done by most housing boards throughout the country) is really the act of a pessimist. What it really does is say: our economy isn't going to get any better. But as Prof. Charles Abrams has pointed out, "Renewability" should

be one of the prime objectives of mass housing in developing countries. For as the nation's economy develops, the housing patterns can change. This option can be ensured by assigning housing sites not to the individual owners themselves but to co-operatives of say 20 to 100 persons. In time say 30 years from now, the whole parcel of land can be developed in keeping with the technological and economic advances of that day.

- (f) Low-rise housing has considerable social and psychological advantages (appendix 1) which this paper has not touched upon, since it deals only with physical costs. However this is a crucial – perhaps *the most* crucial – area of the problem.

Does this mean that the entire city should consist of low-rise structures? Not necessarily so. Certainly at important nodal points in the city – as for instance the CBD – there could be multi-storeyed buildings for accommodating certain specialised uses (e.g. offices or higher-income apartments). But the pattern we have outlined appears to be the most economic and rational for the vast majority of housing units in the city.

Still the nagging doubt persists: in following a low-rise pattern would we not be wasting too much land? Let us look into this problem. If we examine the break-up of land-use in a city we find that the housing area (including KG schools tot-lots local roads etc.) occupies less than one third of the total land use. The rest is used for industry, transport, green areas, education institutions, etc. Furthermore, if we calculate the housing sital area itself, (i.e. the area of the housing sites, without the neighbourhood roads etc.) then we find that the percentage of land use devoted to housing is some where between 15% to 20%, the variation being dependent on the floor space index (i.e. FSI) permissible on the sital areas. For instance, in a city of one million people (appendix 2) the sital area at an FSI of 1.0 will be about 2000 acres. But this is only 15% of the total of 13,500 acres required for all the other uses put together! *Halving* the housing FSI to 0.5 will add only a further 2,000 acres (plus an additional 300 acres for neighbourhood roads etc.). This is but a marginal increase in the overall area of the city (while a circle of 2.6 miles radius covers an area of 13,500 acres, a circle of 2.8 miles radius increases the area to 15,800 acres –

making the distance from the periphery to the city centre a negligible 0.2 miles longer). It is indeed a very small price to pay for the enormous economies and the other advantages which can be effected in the house itself.

Incidentally, it is erroneous to assume that housing densities are directly proportional to the heights of the buildings. Low rise buildings can be placed closer together, and some of the highest densities in the world are achieved in what one might call "Urban Villages" (like the Casbah in Algiers). The density of Bombay island (see appendix 3) is achieved not by the buildings themselves but by the criminal omission of adequate green areas. London has 7 acres of green area per 1000 population; Delhi has 4; Bombay island has 1/4 acre – and this figure includes the "grass" in the traffic islands! It is this "saving" that has almost doubled the densities.

In conclusion, I would like to reiterate that there is really no problem of low-cost housing in this country, there merely is the question of rational and intelligent site planning. We must find efficient land use patterns which allow for individual dwelling units. All our towns and cities were originally based on this kind of land use planning. This is why right up to World War II, Bombay could attract a great number of immigrants without having to throw them destitute on the pavements of the city. It is only in recent years that the Municipal planning policies have swung away from low-rise buildings in favour of more sophisticated and expensive solutions. But the change has been a fruitless one.

Increasing the F.S.I. to 2.0 or 3.0 may mean profit for the individual builder; it brings no economy to the city or the nation. On the contrary constructing high-rise buildings costs considerably more (approx. Rs. 9.00 extra per sq.ft. for a building of ground and ten floors as compared to a walk-up apartment house of say ground and 4 floors). This additional cost is of course met by raising the selling price of the units; and in the distorted land-use picture of our existing cities it is very easy for the developer to command these prices. But this is exactly the kind of exploitation which can be avoided by intelligent land-use planning. We have spent too much time in a fruitless search to find architectural and structural answers to this problem of housing – and they exist only to evaporate into thin air. Pre-fab housing promises only a

marginal, indeed a very subtle, saving in cost; the figure of Rs. 25 per sq.ft. may become Rs. 23; much more often however, it becomes Rs. 27. Yet all the while pointers to the solution exist around us – in our villages, in Jaipur, in Tokyo, in London (a city which is a prime example of the principles outlined in this paper – and a city which is still the most human and livable of all the great urban centres of the world). The lack of low cost housing today is not just the failure of the architectural answers, but rather and primarily due to the fact that the land use planners have stated the question wrongly to begin with. Their suicidal land policies have resembled a poker game in which the stakes are being continuously raised; finally today they are surprised to have reached the point when the vast majority of players drop out because they can't afford the ante.

But this sorry state of affairs need not prevail. The enormous demand for housing in our cities today can be used to advantage; because the scale of this demand makes it possible for the planners to boldly choose large new virgin territories for development and perhaps even restructure the city in the process. If this land is first purchased and then developed, the resulting increase in land values could well be enough to pay the infrastructure of roads, sewage lines, schools etc. This would have the further advantage of restricting the use of the limited resources of the developing agency – be it government or housing board – to the infrastructure and transport systems alone. Thus, with a *minimal* amount of seed money, it should be possible to *use* the enormous urban growth of the coming decades to *finance itself*. There already exists the concept of self-help housing; there must now come into being the concept of – and the programme for – self-help city.

APPENDIX — 1

Extracted from

NOTES ON LOW RISE, HIGH DENSITY HOUSING

PETER RICH

1. Definition

- 1.1 *Height.* Lifts now normally considered, therefore up to four storeys, perhaps higher if entry at other than ground floor, i.e. by use of sloping site and/or deck access.
- 1.2 *Density.* Lower Limit, say 18 dwellings per acre, or 60 to 70 bed spaces per acre. Upper limit, unknown. Environmental standards are the criteria and the aim of research, and experiment will be to find out just how high the upper limit is, whilst still protecting the environment. Imagination, gadgetry, ingenuity and money are required to explore the upper limits.

2. Possible advantages

Although not always applicable, low-rise, high density housing offers the following possibilities.

- 2.1 *Environmental.* Maximum contact with the ground (earth!) for the maximum number of people, and all that this implies in terms of home-entry conditions, private outdoor (usable) space, supervision of pram, toddler and child, etc., the revalidation of the home (house, flat etc.) and street (pedestrian lane, way, etc.) on an urban as opposed to sub-urban scale.

I also believe that this form of development fits well with our social and political traditions and aspirations in that it lends itself to the establishment of a humane balance between the requirements of the individual and the community as a whole.

- 2.2 *Physical.* The grouping of small units allows for adaptation to both topography and site boundaries.

The ability to mix dwelling sizes allows family size mixing so avoiding the isolation of any single group.

- 2.3 *Economic.* The more dwellings per acre, the less land costs per house. Low rise dwellings close together tend to be cheaper in construction costs than medium rise or high rise flats and/or maisonettes. Savings on shorter service and drain runs are often offset by having to construct them to higher standards as they tend to pass close to or even under buildings.

In pedestrian segregated schemes, savings on shorter lengths of roads are often offset by increased footways and general 'hard' surfacing.

3. Special difficulties

The increase in density, car ownership and environmental standards especially those of privacy and safety have resulted in tremendous pressures being placed on the Planning/Architecture/Construction of high density schemes. To deal with these pressures new dwelling types, new patterns of access for people, cars and service, must be devised. This means cutting across established methods, orthodox Public Utility Authorities, fire brigades, By-laws etc.

Be prepared for battle.

4. Environmental Standards

- 4.1 *Privacy.* "Within the residential area we obviously require both community and privacy, and we demand the option to enjoy both" S. Chermayeff.

Present day society places a premium on privacy, particularly in areas of high density. But isolation of family and especially single person units must be avoided.

Our buildings are still financed and built to last 60 years. Therefore how much privacy should be provided? The borderline between privacy and isolation will vary according to

social conditions (Sheffield, Harlow, California) and with time (1966, 2026). The Architect must be fully aware of, for when, and, for whom he is designing.

4.2 *Safety – Pedestrian/Vehicle relationships.*

Pedestrians should be given the option of a segregated route to their destination (garages, shops, primary school, bus stops, play areas, etc). To facilitate this the segregated routes should be planned as the most direct and obvious route from home to destination. 100% segregation is almost impossible to achieve and is probably undesirable socially and psychologically. Therefore if vehicle and pedestrian routes are allowed to cross, they should do so at well defined (for both pedestrian & driver) points and only where the vehicle flow is at its lowest intensity on the site (e.g. at the entrances to short *cul-de-sacs*).

4.3 *Open space – Private and Communa*

(a) A clear hierarchy of open space is essential. A suggested basis is as follows.

Garden, Patio or Terrace. Part or all to be usable as a private outdoor room, sunbathing, supervised play, etc. Common to a single family.

(b) Street, pedestrian lane, for doorstep play, immediate contacts, etc. common to small group.

(c) Larger group spaces, for sitting; talking, roller skating, playing ball, etc. Common to part of the whole community.

(d) Community Space. Walking the dog, flying a kite, kicking a football. Common to the whole community.

Although these spaces can be detailed for various scales of activity anticipated, all activities are likely to take place in any one space at any given time.

4.4 *Children's Play.* It is always surprising to calculate the number of children liable to be running about in high density schemes. In low rise development this factor assumes even greater importance because of the relatively smaller distances between buildings. Therefore regard the whole of the layout as a play structure, and detail ramps, footbridges, staircases

lanes, screens and fences accordingly, i.e. in a robust and safe manner to enable their full "play" potential to be realised. Special spaces for play – as for other forms of development – are perhaps best situated adjacent to main pedestrian routes for interest and community supervision.

The hierarchy of spaces outlined in paragraph 4.3 above will also cater for various play activities and must be detailed accordingly, remembering that adults – especially Architects – cannot control play activities.

5. **Principles of design**

Low rise, high density development demands absolute clarity of organisation if it is not to degenerate into a maze. In an attempt to obtain calmness and clarity within a housing layout we have employed two basic planning principles. (1) Hierarchic system: the routes of pedestrians, motor-cars, supply services and even drain runs are each organised into a suitable hierarchy. The various "movement" hierarchies are then fitted to the site and laid one upon another, commencing and crossing at well defined points. Further, "density" and "special" hierarchies are added, until the final layout is composed of an intricate system of defined and interconnected hierarchies. Both the "circulation" and "architectural" hierarchies must be developed together, neither one being given total priority. (2) Microcosmic organisation: This method ensures that no social or family size group is isolated. The scale of the microcosm is important. In housing layouts, the size is perhaps best regulated by functional and not social criteria, (see paragraph 6.3 below). Thus in our Harlow scheme the microcosm, i.e. the superblock size, is regarded by the length of the standard hose equipment used by the Essex Fire Brigade (150 ft. to front door from hardstanding). We were able to incorporate a trolley system for the collection of paper refuse sacks. For the Portsdown Hills Scheme it was the refuse carry distance that became critical (120 ft.).

It must be stressed that these principles are only tools and are in no way a substitute for architectural vision and design. Hierarchies and microcosms, etc., are all sub-servient to the

vision, for it is vision alone that can extend existing functional limitations

6. **Access and Identity**

Traditional footpaths follow the carriage way thus providing a clarity of direction and route that has lost in many recent examples of high density bastardised Radburn layout. Where dwellings are approached from one side only (by both car and on foot) the minor but indicative problem of house numbering and street naming is avoided. In Radburn schemes the dwelling is approached from one side by car (Refuse, Deliveries, Tradesmen, also visitors, relatives etc., etc.) and from the other side by pedestrians, (Children, postman Milk-man visitors on foot, etc.). Thus the traditional hierarchies are confused; which is front (i.e. public, clean) and which is back (i.e. private)? The symbolic nature of front door, kitchen door, and back door is lost, and doubts arise as to which façade to name and number. There is an urgent need for the creation of new patterns of access which attempts to revalidate the clarity of traditional carriage ways and sideways.

- 6.1 *Services.* In closely built groupings, the organisation of the supply and waste services can be very complex and an unforeseen hazard and source of delay during the construction period. Combined service trenches for Gas, Electricity, Water, G.P.O. and wired T.V. are still almost impossible to obtain. More pressure from architects and contractors is needed before progress will be made with the ultra conservative supply authorities.

Drains and sewers, if positioned under narrow pedestrian lanes together with supply services, tend to be more expensive both in design time and construction. Therefore, it is advisable to keep supply and waste runs separate whenever possible.

7. **Landscaping**

The close "grain" and heavy use of high density low rise development requires careful and above all, realistic, landscaping. "Floorscape", i.e. pavings, kerbs, manhole covers and all surfaces require special attention. The layout

can be helped to work as a "mechanism" by such details, e.g. a surface and its edges can be detailed to accommodate vehicles comfortably and pedestrians on sufferance, or to accommodate pedestrians comfortably and vehicles in emergencies or not at all.

Planting. At Harlow we have adopted a policy of having as much planting as possible within the control of a single family, but so positioned that it can be seen by the community as a whole. To this end we shall supply balcony planting boxes and plant trees to certain private courtyards. We have also agreed that the housing managers will run window box competitions, etc., in an effort to stimulate resident responsibility.

APPENDIX - 2

AREA EQUIPMENT OF A CITY OF 1 MILLION POPULATION

Assumptions

1. Population:	1,000,000
Persons per dwelling unit:	5
No. of dwelling units	200,000
2. (a) Work Force 40% of population :	400,000
(b) Employment in manufacturing:	120,000
(c) Employment in C.B.D.:	80,000

Componentwise area Requirements

1. Residential

(a) Average Area per dwelling unit:	350 sq.ft. (carpet)
(b) Built up area per dwelling unit:	440 sq.ft.
(c) Total built up area :	440 x 200,000 sq.ft.
(d) Residential sital area at FSI 0.5	4000 acres
FSI 0.75	2700 "
FSI 1.00	2000 "

2. **Shopping**
 - (a) Shopping area per dwelling unit: 20 sq.ft.
 - (b) Total built up area for shopping: 20 x 200,000 sq.ft.
 - (c) Sital area at FSI 0.5: 180 acres

3. **Warehousing**
 - (a) Total floor area required for warehousing: 8,000,000 sq.ft.
(assumed to be twice the area of retail trade)
 - (b) Sital area at FSI 0.5 : 360 acres

4. **Primary Schools**
 - (a) 1 school for 5,000 population
 - (b) No. of schools $\frac{1,000,000}{5000} = 200$
 - (c) Area per school including playground - 2 acres
 - (d) Total area required $200 \times 2 = 400$ acres

5. **Secondary Schools**
 - (a) 1 school for 10,000 population
 - (b) No. of schools $\frac{1,000,000}{10,000} = 100$
 - (c) Area per school including playground - 5 acres.
 - (d) Total area required $100 \times 5 = 500$ acres.

6. **Colleges 15**
 - (a) Area per college 10 acres.
 - (b) Total area 150 acres.

7. **Open spaces, play fields etc.**
 - at 1 acre/1000 population 1000 acres
 - City Parks -
 - at 2 acres/1000 population 2000 acres

8. **Hospitals**
 - (a) No. of beds at 4 beds/1000 population: 4000
 - (b) No. of hospitals at 200 beds/hospital: 20
 - (c) Total area for hospitals at 7.5 acres per hospital: 150 acres

9. **C. B. D.**
 - (a) Floor area per employee 125 sq. ft.
 - (b) Total floor area 80,000 x 125 sq. ft.
 - (c) Sital area at FSI 1.5 : 150 acres

10. **Industry**

Area required at 60 workers per acre: 2,000 acres

<i>Component</i>	<i>Area (Acres)</i>	<i>Percentage</i>
1. Residential FSI 0.50 : 4,000 FSI 0.75 : 2,700 FSI 1.00 : 2,000	2,000	14.80
2. Shopping	180	1.30
3. Warehousing	360	2.65
4. Primary Schools	400	2.95
5. Secondary Schools	500	3.60
6. Colleges	150	1.10
7. Open spaces and play fields City Parks	1,000	7.40
8. Hospitals	150	1.10
9. C.B.D. (Sital area)	150	1.10
10. Industry	2,000	14.70
Sub Total (1)	8,890	
11. Other uses at 15% of sub total (1)	1,300	9.60
Sub Total (2)	10,190	
13. Roads and transport facilities at 33.33% of sub total (2)	3,333	25.00
GRAND TOTAL	13,523	100.00 (Say 13,500)

APPENDIX — 3

	<i>Population</i>	<i>Density Persons per acre</i>
LONDON		
1. London Conurbation Centre (1961)	270,395	41
2. Area under Greater London (1961) Council	7,990,161	20
PARIS		
1. City of Paris (1962)	2,970,091	114
2. Suburbs of Paris (1962)	2,856,000	31
3. Parisian Region (1962)	8,500,000	26
MOSCOW		
1. City of Moscow (1960)	6,046,000	28
2. Green Belt (1960)	931,000	2
3. Outer Suburban Zone (1960)	2,100,000	Less than 1
4. Moscow Region (1960)	9,077,000	25
NEW YORK		
1. Manhattan		Over 78
2. Other City boroughs & New Jersey		16
3. Inner*Suburbs		3 to 16
4. Outer Suburbs		Less than 1 to 3

Source: "The World Cities" by Peter Hall

DENSITY PATTERN OF INDIAN CITIES (1961)

<i>City</i>	<i>Population</i>	<i>Density Persons per acre</i>
1. Delhi	23,59,408	60
2. Bombay City	27,84,000	164.8
3. Ahmedabad	12,06,001	52.5
4. Jaipur	4,03,444	26
5. Bhopal	2,22,948	17
6. Kanpur	9,71,062	17
7. Lucknow	6,55,173	33
8. Bangalore	12,06,961	72
9. Calcutta	29,27,289	124
10. Howrah	5,12,598	71
11. Asansol	1,68,689	65.6
12. Trivendrum	3,02,214	16
13. Greater Bombay (1971) (City + Suburbs)	59 lacs	54.54

DENSITY PATTERN OF BRITISH NEW TOWNS

<i>Town</i>	<i>Proposed Population</i>	<i>Density Persons per acre of Designated Area</i>
1. Basigdon	106,000	14
2. Bracknell	54,000	18
3. Crowley	70,000	12
4. Harlow	80,000	13
5. Hemel Hempstead	80,000	14
6. Stevenage	80,000	13
7. Welwyn Garden City	50,000	12
8. Cerby	55,000	20
9. Cwmbran	55,000	17
10. East Kilbride	70,000	7
11. Cumbernauld	70,000	17

Source: "Urban Pattern" by Gallion,

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