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Sri Lanka Journal of Social Sciences

The Intellectual Enterprise In Sri Lanka - G. C. Mendis Memorial Lecture

HOWARD WRIGGINS

It is a great honour for me to have been asked to deliver the G. C. Mendis Memorial Lecture this year. It is also a great pleasure. When I was here before, working on my *Dilemmas of a New Nation*, as my manuscript was nearing completion in first draft, I went to him for advice. He read my paper with sympathy and interest; he made some excellent criticisms. This occasion, therefore, gives me an opportunity to thank him publicly for his very personal assistance that I have not forgotten- over some 23 years that have passed.

To honour him today, I thought it might be interesting to discuss aspects of the intellectual enterprise in Sri Lanka, to which he contributed so much in his time.

As you must have imagined, I take the intellectual enterprise seriously. I understand its urge to be the search for truth, a high calling. I believe there are a number of different dimensions and forms of what we call truth. A religious truth helps us to understand our connection to the world beyond human existence. We can - and do - have convictions about our origins, our links, however obscure, to our predecessors, or to whatever comes next when our hearts stop beating.

These are the issues of truth that preoccupy the theologians and religious philosophers. Theirs is speculative and intuitive knowledge, and mankind has for years devoted huge energies - and still does - to unravelling the ultimate mysteries of our existence, our life's or our death's purposes. I respect this search for religious or moral truth. But today, I have a more modest, far less grand intellectual enterprise in mind. I am concerned with what James Conant called secular learning.

The intellectual enterprise in Sri Lanka I will discuss today, in my view, is not all that different from similarly serious intellectual endeavours in a country like the United States. We all seek a better comprehension of society's origins, what changes our forefathers experienced, and what the future portends for us.

You, too, are seeking the ties that link your todays to your yesterdays. And like us, you seek to discern through the shadow of the future that lies beyond the horizon, something of our destiny in the tomorrows ahead. Here in Sri Lanka, as in my country, astronomers probe the ever-expanding universe. Similarly, we all are seeking better ways to appreciate the different cultures which together make up the human family. We, also, are speculating about just how much more beautiful is small. And we, too, are asking questions about the purposes of our earthly endeavours. the goals and justifications of our effort.

Both our peoples are seeking more productive economies, where each person's effort will produce more of what evergrowing numbers of men and women feel they need, or what they can sell in order to buy what cannot be made at home. Like us, you are interested in a more equitable society, where basic human needs, are met more fully and are more evenly satisfied. Both societies are seeking to shape institutions which will provide that preferred and workable balance between individual freedoms and a tolerable public order. We both grope for ways to combine the energies often evoked by private endeavour with the benefits that come only if these endeavours are set within a matrix of public goals and widely accepted notions of the public good.

We all agree that sufficient food – rice or bread – is necessary for a worthwhile life. The intellectual enterprise if properly conducted, is indispensable to helping us extract more rice, and whatever else we need to live, from the lands our peoples till and the work of their hands in factories and offices. But rice alone is not the end and purpose of our activities.

Without the intellectual enterprise, the life of nations stultifies, its sense of direction is lost; the savour of its life turns flat. If the society functions with order and productively but has little intellectual life, it can be the life of the ant. And where there is no vision, grave errors can be made, even if the people may not perish.

As I see it, the intellectual is more than a critic, standing on the sidelines watching the game, scoring the players' performance like some wireless announcer. Often there are self-proclaimed wise ones who take this superior stance. These are the irresponsibles. In my view, serious intellectuals should be involved in the national enterprise in some fashion. He need not be a political partisan to be engaged, but there are ways in which he can constructively participate. He finds his base in many places in our societies. He may be that almost defunct

species, the independent man of letters. Sri Lanka has had them in the past. More typically, he may be a scientist, pure or applied; or the highly educated administrator who is at the elbow of a senior Minister, Prime Minister or President, where the hardest choices amongst ends and means must be made. He may be a judge, or a Member of Parliament or Minister. Most typically, however, he finds his home in a college or university, usually in the teaching profession. It is of this intellectual enterprise I shall mainly speak this evening.

As Ed Shils,[1] that trans-Atlantic sociologist, reminds us, the intellectual performs a number of roles.

He is the *custodian* of what is already known in his field of specialization, what truths have been confirmed by disciplined study. His field of specialization is not called a "discipline" by accident or merely by courtesy. A methodology has developed for grappling with the special uncertainties and problems of pursuing truth in his field. Each discipline–and increasingly sub-discipline or more particularistic specialization – has its own method for confirming propositions – or truths – insofar as men can know them.

The university teacher also is the *giver* of that knowledge to the coming generation. There is little use, apart from one's own personal delectation, in knowing a field of study without taking it seriously enough to impart it to others. But to impart knowledge to the coming generation is not all that easy. Who cannot tell the difference between the skilled, experienced teacher, and the one stuffed with new-learned knowledge, but cannot teach it? Alternatively, he may impart specialized knowledge or wisdom knowledge to a wider audience – as a publicist, a writer or discourser to the public, like Walter Lippmann or Edmund Wilson. The intellectual as teacher may court popularity by lowering his own standards or by not asking as much of his students as they are able to achieve when they are pressed hard to do their best. The intellectual as publicist may corrupt his learning by sloppy popularization, by misleading but plausible analogies or by catering to popular myths or politically convenient misrepresentations that meet contemporary political fashions. Imparting knowledge is a high responsibility, and is as important as being its custodian.

The responsible intellectual may also be an *investigator*. He is seeking more reliable propositions on questions already asked in his special field of concentration. Perhaps, however, he is bolder than that,

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E. Shils, (1978) "The Academic Ethos", *American Scholar*, Vol. 47, (t. 2.)

attempting to break new ground. He may be pursuing elusive truths in hitherto uncharted territory. To do this – it is never easy – he needs to take the search for better truths very seriously. He must be dedicated to that task. He must keep nagging at himself – and in the process annoy his wife and colleagues – by his dissatisfaction with known truths. He must ask questions. He must be restless with the ideas that are given.

To pursue the art of investigation, he must be disciplined and methodical. There are countless stories in the laboratory sciences of so-called discoveries by what are often loosely termed "accidents." But look carefully at each example, and we will see that the "accident" was within a very narrow range. It was accidental only in the sense that something occurred which had not been expected. Months of careful disciplined observation preceded that event; variables were meticulously identified, relationships among them recorded. And trained, alert and questioning specialists were carefully, patiently, even ploddingly pouring over their desks, or their workbenches, or their agricultural experiment plots. Otherwise, the accident when it occurred would not have been noticed; its possible significance not appraised; the creative, next follow-on question would never have been asked.

The *Double Helix* by James D. Watson recounts in vivid detail the urgent search for an explanation of DNA, that mysterious element of our genes that tiny fragment of a cell which carries all our physical inheritance from one generation to the next. The book dramatizes the interplay between empirical observation, incredibly specialized knowledge, and the casting up and testing of hypotheses as brilliant men and women competed against each other for the Nobel Prize. Suddenly, the pieces fitted together in a hypothetical explanation that seemed to provide an answer to the questions they were asking. And then, the ingenious, creative flash occurred that devised a method by which the inspired hypothesis could be tested.

In the non laboratory disciplines, too, there is a similar process, although the events are rarely as dramatic. The questions are asked; the empirical materials are laboriously, painfully gathered; they cumulate often in disorder. Hypotheses are refined; the data by themselves do not provide answers to questions nor test hypotheses. Creative insight is required to formulate persuasive empirical tests.

If I may be autobiographical for a moment. In writing my book on Ceylon many years ago, the whole seemed a sea of confusion; I had much specific data from much reading and many, many conversations. I then came down with paratyphoid fever, and was laid up for nearly two months.

My dear wife provided me with kits and materials and I felt my strength gradually return as I tinkered with model airplanes . . . far from the subject matter of my major study. As I gathered strength in a quiet cottage in Nuwara Eliya, in a mysterious way, the shape of the finished product materialized in my mind. The outline of the book that gradually rose through the mists of my own uncertainty became more and more solid, and that became the armature for the whole study. How did it emerge? At what point as I toyed with balsa, glue and tiny diesel motors did the unconscious mind that brings its secret order to our lives define a design and float it to the surface for me to grasp? But had I not concentrated all my strength on grappling with that fascinating problem for over a year already, the framework never would have emerged. Had I not been alert, watchful, ready to grasp those inspired moments, the hints and suggested design would not have been noticed.

I use words like "grapple," "strive," "all my strength," because these affairs are not accomplished "at leisure," so to speak, when one is at ease. There is, however, a curious element in all this I have never understood. I also used the word "toyed with." Somewhere in the process there must be some lighthearted playing with ideas. The crazy hypothesis must be toyed with, there just might be something in it. There is effort in the process, but there is also fun. "Try it on for size" is an image we sometimes use in group discussions among serious scholars – a note of irresponsibility creeps into the argument; one is not putting forward an idea as a serious proposal; one's professional reputation is not at stake. There is no more seriousness about that than there is in going into a store and trying on a jacket or a coat, "trying on fer size." So there is a serious, hard slog about the intellectual enterprise. But there is also a need for lighthearted toying with alternative answers to a difficult problem.

There is a fourth role of the intellectual these days, one which has tricky implications and special responsibilities. He may become an *advisor* to governments or to community leaders. Once upon a time, universities were thought to be largely places for custodians, mainly of religious truths, and for teachers. But in recent decades in my country, particularly, intellectuals have been drawn into advisory roles. Experience during the Great Depression suggested that in our universities there was a store of unused talents which if applied to contemporary problems, might help the community cope with what seemed then to be grave difficulties. This trend was further accentuated during World War II. The intellectuals may bring fresh ideas to bear on

old, all-too-familiar problems. They may imagine options which more hard-pressed or earth-bound bureaucrats could not imagine, or would not be caught dead suggesting because they would be thought irresponsible-the worst sin of the bureaucratic profession.

Though it may often be rewarding to the bureaucrat wise enough to tap intellectual resources that may be available, and to the intellectual involved, there are also liabilities to the intellectual who is drawn into an advisory role.

The intellectual must be wary that his reputation for special knowledge or for apolitical objectivity is not being misused by those in power to give legitimacy to an otherwise dubious policy solution. He himself must be careful not to misuse his preferred access to the corridors of power by promoting solutions that he personally prefers for reasons that have nothing to do with the special knowledge which gave him that entry to influence.

Moreover, to be frank, the bureaucrat will often find the intellectual not much help. Unless they have had opportunities to gain experience, to know the contingent, messy character of typical answers to "real world" problems, intellectuals can be very unrealistic. Used to contending on theoretical questions, where logic and the symmetry of intellectual structures are important, they may be unable to function in the contingent world of political or bureaucratic give and take and half loaves; a world where the perfect can be the enemy of the good. In many instances, the detailed knowledge necessary for applied solutions is not available in intellectual circles, since universities may have been working on quite other - and perhaps equally important - problems. A more deliberate scholarly pace or a commitment to thoroughness may be totally inappropriate to the urgencies of public affairs.

Finally, bureaucratic management is complex, and requires a detailed knowledge of elaborate structures and esoteric rules and conventions. An academic advisor will not understand them, or will take too long to see their importance.

These four different aspects of the intellectual enterprise - custodial, giving, investigating and advising - are important for a variety of reasons. The past must be known to the present; the young must be drawn into a perception of their past. But they must also have their minds trained, their analytical powers sharpened. In our future years, when there will be twice as many of us in a mere thirty-five years, we will experience more rapid

changes than in our past. Past solutions will not be good enough for the future. They must have intellectual curiosity and be of inquiring mind. Our children must be more ready than we to tackle unprecedented problems in unprecedented ways. For that their minds need to be trained. Men and women must be lured, invited, encouraged, indeed led forward to the life of creative intellectual activity.

If I may be permitted an observation, in Sri Lanka as in many countries, large numbers of people and institutions depend upon bureaucracies and politicians to chart our course and to define our answers in a remarkable range of fields, as if they were the fountainheads of wisdom. However, as a temporary full-time bureaucrat, I can affirm that there are real limits to bureaucratic wisdom. Each of us has to work within the area laid down for our own bureaucratic unit. There are institutional limits to what we can perceive, to the questions we can raise, to the solutions we can consider. Moreover, there is bureaucratic turf to be defended; our career interests can be seen to be favoured or harmed by one solution more than by another. As bureaucrats, we are neither infallible nor entirely disinterested.

Nor can it fairly be said that elected politicians are bound to be right. They have electoral imperatives bearing heavily upon them. These do not require the assertion of truths, but the evocation of what seems plausible. Politicians and parties are no more likely to be right in every case than bureaucrats. Political contests require the simplification of issues into slogans, and superficial ideological formulations which can as easily mislead as they can inspire.

Moreover, both bureaucracies and politicians have a foreshortened time horizon. Have they the detachment from the urgencies of today to press the case for answers that will be germane, even critical, five to ten years from now? At the same time, of course, policy must be set if the long run is to be reached at all.

That is why I argue the old fashioned, but nevertheless sound point, that it is better to have a variety of sources of insight than leave it all to politicians or bureaucrats.

On the other hand, my reading of recent South Asian history suggests that in a number of countries, the expression of criticism, or even divergent, alternative views on public issues can evoke annoyance, anger and even government reprisals. I believe there are two main reasons for this. In the first place, in monarchical feudal regimes before the Europeans came, and in the colonial regimes that followed them, and even, dare it be

said, in some successor governments after independence, to differ publicly with the ruler typically was seen as *lese majeste*, if not approaching treason. Elected rulers, for the most part, are typically unsure of themselves. Some believe they do have the only answers and are insulted by the presumptuousness of any critic. Some others are really aware of how shadowy is our knowledge, and they are made more edgy by that awareness. In either case, when an individual is hard-pressed by anxiety or by heavy day-to-day responsibilities that he is doing his best to shoulder, he is likely to lack that human resilience to absorb unsolicited criticism, even if well-meant. And of course, some criticism, of political leaders, of policies and even government institutions have been freighted with ill-intent and destructive purpose, often based on one-way ideologies that leave no room for diversity or political change once their believers get their way.

Precisely because the problems of changing formerly colonial countries into more productive and equitable societies is a complicated matter, I believe it is better to have a variety of sources of insight and policy advice. Quasi-independent centres of intellectual activity are desirable, indeed necessary, if huge, costly and sometimes irretrievable errors are to be avoided.

Shifting our focus from the multiple roles and possible public, short-run utility of the intellectual enterprise in general, what can be said about the state of intellectual activity in Sri Lanka toward the end of the 1970s? It would be presumptuous of me to claim to know the answer to that question. During this stay here, I have not had the opportunity to mix and mingle with your scholars as I would have liked; nor can I claim familiarity with the full range of Lankan scholarship since I read neither Sinhalese nor Tamil and am limited to the sphere of the social sciences. But I will venture an impression which I hope you will accept for what it is – an impression from reading and from talk. I must own to some disappointment by what I have seen and what people have told me about intellectual activity in contemporary Sri Lanka. I may be misreading the signs, but let me try a few observations.

The university community, while it has greatly expanded, has become more cautious. During the last ten years or so, there seems to me to have been fewer scholars ready to criticize government performance than used to be the case earlier. Even if the basic assumptions of policy are accepted, there are fewer efforts to suggest constructive alternatives to specific policies than was the case twenty years ago.

Some excellent books and articles have been written during the last ten years, to be sure. But alas, too many are the result of Sri Lankan scholars who have gone abroad, and all too few have been brought to fruition here at home. Two excellent volumes of the *History of Ceylon* have long since been completed and published. But where is the middle volume we have all been eagerly waiting for over ten years? Translations of useful works into Sinhalese have been proposed, even promised, but the labour is never even begun. What are the deterrents to serious scholarship? I am told there are numerous reasons for this. Many of your most talented faculty are greatly overburdened by bureaucratic routines. Is it really necessary for your finest scholars to have to devote as much time as they do to designing examinations? Or for marking examinations which serve only to scatter the candidates on a vertical scale but which provide little incentive to imaginative reasoning or creative thought on the part of those who are tested? From my own observation I would argue that competitive political gamesmanship has, at times, distracted certain professors from their higher priority tasks. But to be fair, the temptations and distractions brought to the campuses by outside political forces share responsibility for this impediment to serious work on the campus.

Creative intellectual endeavor is demanding. It requires many specific decisions of methodology, research strategy, empirical data collecting. Where empirical data gathering is necessary, it requires time in the field for interviewing or observing; modest travel funds are necessary. Often ideas must be tested amongst critical but interested peers, workshops can draw together knowledgeable colleagues. And in the end, there must be foreseeable opportunities to publish, so that others can know of one's work. Equally important, publication is a pre-condition for that other element of a creative intellectual enterprise – the critical review of one's work by equally qualified, and perhaps more knowledgeable, peers.

But none of this environment for creative scholarship is there ready made. It must be developed, encouraged, nurtured.

And for this the university environment makes a critical difference. Is there now modest support for such activities? Do scholars have such opportunities regardless of their political party affiliations, their family connections or their community of origin? Are there institutional devices to help identify younger, promising scholars and direct resources their way regardless of where they come from in society? Or does one still depend on such programs as Fulbright, British Council or other foreign fellowships? They are excellent, but are they enough?

None of this is easy, particularly when other development efforts for investment are so costly – and obviously urgent, and resources in the education budget are so limited. But I sometimes wonder whether it wouldn't be a better economy if more funds were allocated to inducing present faculties to turn their trained minds to contemporary policy problems while depending somewhat less on costly specialists imported from abroad for too brief consultancies. One cannot do without a number of foreign advisors during this period of urgent development. But are they *all* necessary? So many obvious local problems cry out for systematic empirical observation, analysis and recommendation which require study by scholars who know the local situation and culture in depth. And so many Sri Lankan graduates want to use their training to some good purpose!

A fascinating model study is now underway to determine which factors contribute to successful settlement in such places as Minneriya or Gal Oya, so that the new settlements can avoid errors of the past. But to find out, one cannot sit in offices or studies and speculate. One must get into the field and talk to the settlers themselves. Why do irrigation engineers and farmers so rarely see eye to eye on how to conduct and manage water on the fields, where the farmers labour? What happens to traditional family life as women go to work in factories and offices, or receive a level of education their mothers never dreamt of? And was "traditional family life" as lovely for all other members of the family as it was for father? Why have Sri Lankans rushed to the cities far less than their counterparts elsewhere in South Asia, and how can the countryside retain its attraction even as job opportunities in the towns and cities expand over the next ten years? Could some serious interviews with workers, managers and users of the CTB help us understand the problems of that essential but embattled service?

All these and many other questions require empirical field research. Serious exploration of this kind has its democratic imperative. To really know, one must pay sufficient respect to the opinions and experience of real live individual Sri Lanka, small, ordinary people, where they are, in their fields and in their homes. On their readiness to join the national effort, all else depends. Generalizations drawn up in government offices or from M. P. samplings, or grouped by such dubious concepts as "classes" or even "linguistic groupings" are far less valid than conclusions drawn from meticulous field work interviews. This is not easy; it cannot be done casually; it requires meticulous attention to detail and follow

through – all virtues that are sometimes difficult to sustain, when the weather is hot, field travel is often difficult if not costly, and where the people in authority who ask the questions may not use sufficient foresight so that the explorations can proceed in a timely, orderly way.

Resources are necessary, too. I take it there is an increasing use of contract arrangements between government agencies and members of the scholarly community. Is there not another possible source of support for such activity? Might not some of the wealthy families that still appear to have substantial funds available combine a portion of their resources into a scholarly foundation, like the Guggenheim or a Volkswagen foundation, though on a smaller scale? The families concerned could make a real contribution if ways could be found to stake creative younger scholars who want to tackle issues o public concern, regardless of their community of origin or their family cofnections.

It is a matter of regret, which I know is shared by many officials and scholars, that so many talented Sri Lanka have migrated overseas. It is wrong to assume it is simply the higher salaries that have lured them away from their homeland. This is only part of it. But by no means all, as has been demonstrated by a careful empirical study on the brain drain conducted by Bill Glazer at Columbia University. Could it be that the lack of intellectual stimulation in certain academic departments was simply stifling? In how many departments has it been the case that ancient chairmen, who held their posts for so long, really nurtured and inspired serious scholarship rather than discouraged it in countless subtle and not-so-subtle ways? Could it even be that in certain periods, the officials in the Ministry of Education have been highly arbitrary, sometimes acting as if university faculties were not more than interchangeable parts, to be shoved here and there in the way that clerks are sometimes treated?

Another requisite for sustained creative scholarship one might call protection or, better perhaps, autonomy. Who will protect the independent scholar from political reprisal if his observations do not fit the current contemporary fashion?

I remember with gratitude the staunch role played by the President of Vassar College where I was teaching before we came here in 1955. Sarah Blanding was herself no scholar, but she understood the importance of defending her faculty from the kind of political pressures brought to bear upon our universities during the McCarthy period. She firmly stood

between local political busybodies and her faculty. No amount of public innuendo or threat intimidated her. And I have always thought her a splendid example of what a university president may sometimes be called upon to do.

But to welcome, to encourage the expression of diverse views is not only the responsibility of the immediate university president or vice-chancellor. It is something that the wider society needs also to encourage. It is often said that the powers that be welcome criticism. Only if criticism is encouraged, it is said, can bureaucrats be kept up to scratch and Ministers deterred from the temptation to misuse their positions. Only then will urgent policies decided at Cabinet level assuredly be implemented at the nerve endings of the bureaucratic or organizational system, for often the top-most officials simply do not know when their orders are not implemented. They need the press as a check on performance. But has careful criticism really been welcomed? Have the studies of knowledgeable students of some aspect of public policy been given careful attention, even if they contained some criticisms or some exaggerated inaccuracies? To be sure, some critics of the whole system have taken unfair advantage of an atmosphere of tolerance. Some academics have been not analysts, but political polemicists. There may even be, as some claim, a tendency to run down out of jealousy anything constructive someone else has done which one did not have a hand in oneself. But have these been sufficient reasons for the public expression of diverse views to have become as difficult as they have in the past decade?

Looking in another direction, there are three very positive developments in the field of scholarship I would like to note. In the first place, promoting the training in colleges through the swabasha stream to the university community a far wider range of talented young men and women than was available when entry was only for those who knew English. To be sure, linguistic difficulties have been tragically intensified. It has been hugely difficult to teach university subjects when books and specialized articles in the indigenous languages were scarce if non-existent. As a result, many students have perforce been only partially trained. But I have been impressed by the number of talented individuals who have come into your scholarly life from the swabasha streams. A pool of talented men and women has been opened which earlier was not drawn upon.

Secondly, and I am on less sure ground here than I would like, I have a strong impression that training in agricultural sciences and engineering has been much strengthened during the past twenty years. The exodus to the

Middle East and to western countries is a sign that the quality of your training in these fields is of a high order. And we can only hope they will return once the pace of growth in the Middle East slows down, as some predict it will within the next few years.

A third, an institutional development, may bring a major difference. The University Grants Commission can make a real contribution if it is assured the autonomy its British counterpart enjoyed from the beginning. In Britain, its main function was that of allocating funds among already well-established institutions. Here the tasks of urgent academic construction – indeed reconstruction – pose far heavier responsibilities and make its role all the more important. If the members of its governing board can retain their stature as individual scholars and fend off the uninformed efforts of influential figures who are not fully aware of the requisites for nurturing a powerful intellectual tradition, that institution can make a major contribution to these matters.

Another innovation since we were here before deserves mention – the Marga Institute. There will always be those who will criticize an institution that is not performing the ideal function set for it. But Marga represents a positive innovation. Indeed, it may turn out that as we look back on Marga 10, 15, 20 years from now, it will have been one of the major institutions contributing to stopping, if not reversing, the brain drain. A number of younger scholars who have gained full training qualifications abroad are now finding Marga one of the most interesting places for them to apply their talents in Sri Lanka. At the same time, Marga is making a contribution to the analytical and intellectual framework within which certain problems of the Third World can be considered.

Nearing my conclusion, I return to that fine scholar we honor today. Professor Mendis did not do much in an advisory role on public policy. But he had clear ideas on the custodial, training and investigative aspects of the intellectual enterprise. As I look at his work, I see him to the very end probing, asking questions. What are the major unanswered questions of Sri Lanka's history? There are so many that still need to be examined! In the pursuit of historical truth, he quietly but persistently posed critical questions a reasonable but skeptical man might ask to clarify a point, to illuminate a shadow of doubt. He tested conventional – and often comfortable, accepted notions.

Two final observations related to Professor Mendis. He was a rigorous scholar, and laid high demands upon his students. But he was humane; indeed, to some of his students he demonstrated a degree of humane

sensitivity to their ubjective selves that was most remarkable. Here is a story a former student of his recently told me. This young man worked for Professor Mendis as an assistant in the university hostel. He had boldly, and as it turned out, prematurely declared to his parents he needed no more support. He found meeting his financial obligations difficult, and had to layover his telephone bill each month. Professor Mendis, who every month reviewed the hostel's accounts, noticed this. After several months he quietly paid the telephone bill himself. And he came to my young friend and said, "I have paid your telephone bill; you must not let it worry you. If you allow it to worry you, my having paid it would have been useless. Let us now forget it and you will forget it and we can now start afresh." That was many years ago, but my young friend never forgot that understanding generosity, the inconspicuous gift, and his insistence that there be no need to worry his mind about it.

The second point relates to his professional concern – the teaching of history in certain schools has fallen off dramatically. It is not because people wish to free themselves from awareness of their history. But rather, the curriculum inherited and as presently established, precludes these students who go into sciences from studying history! Indeed, there are some leading schools in Colombo, I am told, where the teaching of history in the upper grades has practically ceased. This is so, it is said, because ambitious parents are so determined that their children should do well in their science exams that they are directed to leave history alone. Indeed, interviews with candidates for Fulbright and other overseas fellowships are now indicating a shocking lack of knowledge among Sri Lankan university graduates not only of history, but also of geography and of the arts literature.

This greatly distresses me; it would distress Professor Mendis far more. There must be some way to alter curricula so that even those who go far in the science stream can gain a sense of their own cultural and historical heritage. In Sri Lanka, history is as rich as it is varied if the full range of your country's historical experience is brought within reach of your students. C. P. Snow used to write about the two cultures, a division in the intellectual enterprise as unfortunate as it is unnecessary. Scientists are needed in politics and the public service at all levels, and indeed are actively involved in such pursuits here today. We have only to look at the ambitious Mahaweli Development Scheme. How much more valuable their contribution would be if they had more of the long range understanding and security of judgement that a study of history can provide.

In conclusion, on behalf of what Garrett Mendis stood for let me reaffirm my belief that the study of history, as he practiced it, is indispensable. I leave you with four important questions. How can we know what we are if we do not know what and where we have come from? How can we know what directions we can go in if we do not know where we have been? How do we know what challenges in the future we can overcome unless we are aware of the challenges we have already mastered in years gone by? And how can we conquer the problems of the future, if we ignore the valuable lessons of the past?

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Educational Opportunity and the School Age Population in Sri Lanka

SWARNA JAYAWEERA

Education is widely regarded in Sri Lanka as a major agent of individual and national development, and in this context the International Year of the Child may well be an appropriate time to review the issue of educational opportunity. This year has focussed attention on the needs and rights of children which were spelt out in the UN Declaration of the Rights of the Child 20 years ago but which are still largely illusory goals – the need to ensure their physical, mental, moral, spiritual and social development, and to protect them from neglect, exploitation and cruelty[1]. Unfortunately in Sri Lanka officials and the public tend to salve their conscience by delegating all responsibility to the International Year of the Child Secretariat and to be content to assume the role of critics in a task which requires maximum national awareness and participation.

Among other objectives the Declaration seeks to ensure for children free and compulsory education at least at elementary level, equal opportunity, and protection from social and economic activities which "interfere with their physical, mental and moral development"[2]. Since the nineteen thirties, policies to extend educational opportunity in Sri Lanka have ranged from the provision of free education and school facilities in urban and rural areas to welfare measures such as the provision of scholarships and free school books. It is necessary, however, to review the current situation in order to counter inertia caused by complacency and to focus attention on needs and problems.

In low income countries with resource constraints universal education may appear to be an unrealistic aspiration and educational problems are often the consequences of distortions and inadequacies in the total develop-

1. U. N. Declaration of the Rights of the Child, 1959.
2. Ibid. principle 7, principle 9.

ment process. Nevertheless effective policy formulation and implementation have a significant role to play in ensuring optimum development of available resources.

Participation in education

Access to education is only one aspect of educational opportunity and its complement, outcomes of education, are reflected to some extent in quantitative data relating to educational participation and in qualitative achievement and development. The latter is more difficult to assess but the former may be useful as an index of educational opportunity and as a pointer to needs and priorities.

It has been assumed that there is a high participation rate in education in Sri Lanka since education has been free for over three decades and the island covered by a network of schools. While the participation rate in primary education did increase from 57.6% in 1946 to 74.4% in 1963 and in secondary education from 11.2% in 1953 to 43.3% in 1963, there has been a decline in enrolment ratio in both primary and secondary education since then. (Tables 1, 2 and 3). This decline has been largely ignored although the Consumers' Survey of 1973[3] drew attention to the increasing proportion of non-school going children in both urban and rural areas. Estimates made in the mid-seventies indicate a participation rate of 54.3% in 1974[4] and 53.4% in 1975[5] for the age-group 6-19 years (the age of admission to schools was raised to 6 in 1972) as compared with 65.2% in 1963 and 56.7% in 1971 for the 5-19 years age group. This decline in enrolment has taken place at a time when many Asian countries have increased substantially their enrolment rate in primary education[6].

Equal opportunity is an empty phrase in a situation in which approximately 20% of 5 or 6 year olds do not enter the school system while "drop-out" data indicate a high incidence of early leaving. It has been estimated that of 100 students who entered Grade I in 1961, 45% reached Grade 6 in 1967 and 5% Grade 11 in 1972[7]. There is inadequate data to

3. Survey of Sri Lanka's Consumer Finances 1973, Central Bank of Ceylon, Colombo, 1974, p. 28.

4. Needs of Children and Adolescents, Marga, Research Studies 5, Marga Institute, Colombo, 1975, Ch. II, Table IX.

5. Calculation based on school population in School Census and estimated population data.

6. Unesco Office of Statistics, Paris.

7. Data based on statistics from Ministry of Education and presented in "Needs of Children and Adolescents", Marga Research Studies 5, Marga Institute 1975, Ch. 2, Table XI.

ascertain retention rates of specific cohorts of school entrants but Table 4 gives enrolment figures in Grades 1, 6, 9 and 11 pertaining to students who entered the school system in 1965, 1969 and 1974. The percentages presented cannot be termed 'retention rates' as grade enrolment figures include repeaters. It appears, however, that there has been an increase in the number of children proceeding to secondary schools in the early seventies, a decline in the mid – seventies and an increase again in recent years. The decrease in the drop-out rate in Grade 11 is the result of the liberalization of criteria of eligibility for entry to the G. C. E. Advanced Level class (Grade 11).

Notwithstanding these changes, educational opportunity in Sri Lanka has to be viewed in the context that 40% of school entrants do not yet receive any secondary school education, 60% leave without reaching the G. C. E. Ordinary Level classes which lead to the basic qualification for at least middle level employment, and 80% fail to proceed to Grades 11 and 12 which determine access to higher education.

TABLE 1

Participation rate in education by sex and age groups 1963 and 1971

Age group	1963			1971		
	Male	Female	Total	Male	Female	Total
5–11 ..	77·6	74·6	76·2	66·8	64·7	65·8
5–15 ..	76·7	72·0	74·4	66·8	63·7	65·3
15–19 ..	43·3	36·6	40·0	37·1	32·9	35·0
11–19 ..	56·8	48·9	53·0	49·6	44·5	47·1
20–24 ..	5·3	4·0	4·6	8·1	7·0	7·4
5–19 ..	67·7	62·5	65·2	58·4	54·9	56·7
5–24 ..	56·2	51·3	53·8	47·6	44·0	46·0

Source: Based on Census of Ceylon, 1963 and 1971, Department of Census and Statistics and presented in Status of Women: Sri Lanka, University of Colombo (1979), Table 5·8, p. 277.

TABLE 2

Participation rate in full-time educational institutions by sex and age - 1963

Age	Both Sectors			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
5 ..	48·1	48·0	48·2	52·7	51·4	54·0	47·3	47·4	47·1
6 ..	73·6	74·8	72·3	79·8	81·3	78·1	72·4	73·5	71·1
7 ..	81·1	83·3	78·9	88·2	87·5	88·9	79·7	82·5	76·9
8 ..	83·5	84 3	81·8	87 9	90·1	85·7	82·6	84·1	81·1
9 ..	84·7	86·3	83·1	91·7	92·6	90·8	83·3	85·1	81·5
10 ..	83·5	84·8	82·2	86·6	90·2	82·8	82·9	83·7	82·0
11 ..	82·0	84·7	79·1	88·3	89·0	87·5	78·0	79·1	77·3
12 ..	73·6	77·3	69·6	80·7	82·3	78·9	72·2	76·3	67·7
13 ..	70·8	75·3	66·2	78·0	80 0	75·9	69·2	74·2	64·1
14 ..	63·8	68 8	58·5	73·6	74·6	72·5	61·4	67·4	55·3
15 – 19 ..	40 6	43·3	36 6	49·7	51·2	42·9	37·5	41·1	33·8
20 – 24 ..	4·6	5·3	4·0	12·4	13·4	11·2	2·5	2·7	2 3
25 – ..	0·4	0·4	0·6	0·7	0·7	0·8	0·4	0 3	0·5
Total 5 - 24 ..	53·8	56·2	51·3	58·6	58·5	58·4	52·7	55·3	50·1

Source: Census of Ceylon, 1963, Department of Census and Statistics.

TABLE 3

Participation Rate in full-time educational institutions by sex and age – 1971

Age	Both Sectors			Urban Sector			Rural Sector		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
5	15·6	15·7	15·4	16·4	16·4	16·4	15·4	15·5	15·2
6	60·1	60·8	59·4	62·4	62·6	62·1	59·5	60·3	58·2
7	73 3	74·1	72·5	76·7	77·3	76·1	72·4	73·2	71·5
8	76·8	77·8	75·8	80 1	80·5	79·6	76·0	77·0	74·9
9	79·1	80·3	77·8	82·1	83·1	81·1	78·1	79·6	76·9
10	78·1	79·8	76·4	81·4	82·6	80·2	77·2	79·0	75·4
11	77·4	79·6	75·1	82·0	83·2	80·7	76·2	78·7	73·4
12	69·3	71·6	66·8	75·1	76·6	73·5	67·7	70·3	64·9
13	64·9	67·8	61·9	72·3	74·2	70·3	62·8	66·0	59·5
14	57·2	60·2	54·2	65·7	67·5	63·7	54·9	58·1	51·6
15	51·0	53·4	48·5	60·3	62·5	58·0	48·3	50·7	54·8
16	43·2	45·7	40·8	52·9	55·5	50·1	40·5	42·7	38·2
17	35·2	37·1	33·3	43·6	46·0	40·9	32·7	34·3	31·2
18	24·2	25·9	22·5	30·2	32·3	27·8	22 5	23·9	21·0
19	18·8	20·2	17·3	23·8	25·1	22·2	17·2	18·5	15·9
20	12·6	13·8	11·4	16·8	18·0	15·4	11·2	12·3	10·2
21	10·4	11·1	9·7	14·1	14·7	13·4	9·2	9·8	8·6
22	7·7	8·4	7·0	11·5	12·0	10·9	6·5	7·1	5·9
23	6·3	6·9	5·7	9·6	10·1	8·6	5·2	5·7	5·9
24	5·2	5·9	4·6	8·2	8·7	7·6	4·2	4·8	3·7
5 – 25	46·0	47·6	44·4	49·3	49·6	49 0	45·1	47·0	43·2

Source: Census of Population, Sri Lanka 1971, Department of Census and Statistics.

TABLE 4

Enrolment in Schools in Specific Grades

Grade	Year	Enrol-ment	% Reten-tion	Year	Enrol-ment	% Reten-tion	Year	Enrol-ment	% Reten-tion
Grade I ..	1965	380,800	100·0	1969	415,897	100·0	1974	361,493	100·0
Grade 6 ..	1970	234,180	61·5	1974	230,719	55·5	1979	222,431	61·5
Grade 9 ..	1973	158,778	41·7	1977	161,590	38·8			
Grade 11 ..	1975	36,221	9·5	1979	80,097	19·2			

Source: Based on School Census data, Ministry of Education

Tables 5 and 6 present early school leaving statistics in 1976 and 1979. A singular feature of educational participation in Sri Lanka is the relatively high proportion of 'repeaters' particularly in the primary school (Table 5). This proportion has been as high as 30% in Grades 1 – 4 in educationally backward districts and this phenomenon of 'repeating' in the primary school is an indictment of the process of education to which these young children are exposed. It is possible that this early experience of failure is a result of absenteeism reflecting problems in educational participation and is, in turn, a predisposing factor to early leaving.

TABLE 5

Leaving and Repetition Rates by Grades – 1976

Grade	Leaving Rate (%)	Repetition Rate (%)
1	0·8	15·6
2	2·3	12·6
3	5·5	12·2
4	7·4	10·9
5	10·2	11·8
6	7·5	6·3
7	6·3	4·6
8	13·9	4·6
9	50·7	25·9
10	74·8	1·5
11	2·6	2·6
12	74·8	25·2

Source: School Census, Ministry of Education.

TABLE 6

Early School Leaving Ratios 1978/79

Educational Districts	Gr. 1	Gr. 2	Gr. 3	Gr. 4	Gr. 5	Gr. 6	Gr. 7	Gr. 8	
Colombo South ..	0·6	0·2	2·3	4·1	—	4·7	9·6	6·1	2·5
Homagama ..	0·4	—	—	—	2·3	3·4	8·1	4·7	0·3
Gampha ..	0 6	0·1	1·9	2·0	3·6	6·0	7·7	6·6	3·0
Minuwangoda ..	0·7	1·8	2·6	4·9	9·5	5·6	9·7	5·1	4·2
Kalutara ..	1·2	0·4	2·1	4·0	6·5	4·9	7·7	4·9	3·2
Kandy East ..	1 0	—	2·8	2 7	4·5	5·6	6·0	5·2	3·7
Kandy West ..	1·6	2·1	4·3	3·1	1·4	3·5	5·9	2·8	2·8
Matale ..	1·3	3·9	5 9	4·6	5·9	5·2	6·6	4·1	4·3
Nuwara Eliya ..	3·0	0·3	1·0	0·5	0·3	1·3	1·5	—	1·2
Galle ..	0·9	1·0	2·6	3·9	2·8	5·8	5·2	4·0	2·8
Matara ..	1·0	1·5	2·6	3·5	3·9	4·2	5·1	6·2	3·0
Tangalle ..	1·2	1·3	4·3	5·3	7·1	8·8	7·8	9 0	4·7
Jaffna ..	0·5	0·1	3·5	3·6	6·7	3·1	5·9	3·3	3·0
Mannar ..	1·2	2·1	4·9	10·1	14·5	12·0	10·9	8·8	6·7
Vavuniya ..	1·3	2·6	7·4	7·1	12·5	9·1	9·8	5·4	8·0
Batticaloa ..	2·1	5·5	9·0	11·9	15·9	7·1	6 6	6·1	16·3
Amparai ..	2·4	6·4	7·1	6·1	6·8	3·4	6·0	6·3	2·5
Kalmunai ..	2·8	4·8	9·9	8·3	14·5	5·8	3·8	4·0	6·5
Trincomalee ..	2·3	3·9	6·2	10·4	11·9	6·1	8·6	8·6	6·2
Kurunegala ..	0·9	—	1·9	3·9	2·5	4·4	6·0	2·9	1·8
Kuliyapitiya ..	0·8	0·8	4·6	4·7	5·6	7·2	9·0	5·9	4·2
Nikaweritiya ..	1·2	1·6	1·4	6·0	6·3	4·2	2·6	4·0	3·0
Chilaw ..	1·1	—	3·0	5·7	7·3	6·1	5·1	6·7	3·8
Puttalam ..	1·4	4·9	5 9	12·7	13·7	11·0	7·9	8·3	6·3
Anuradhapura ..	1·6	0·7	4 7	4·3	6·2	6·7	8·1	3·1	3·7
Polonnaruwa ..	1·4	3·9	6·3	2·7	14·2	6·4	6·8	3·8	5·3
Bandarawela ..	2·0	4·5	4·7	5·7	2·6	7·5	6·5	4·6	4·4
Moneragala ..	1·3	3·4	5·9	2·0	9·6	9·9	5·9	8·1	4·7
Ratnapura ..	1·4	0·5	1·7	4 0	3·5	5·2	5·9	5·4	2·7
Kegalle ..	0·9	2·1	2·9	3·6	4·8	7·3	5·6	4·1	3·5
Total Sri Lanka ..	1·3	1·2	3·4	4·3	4.9	5·4	6·5	4·9	2·8

Source: School Census, Ministry of Education, 1979.

The Grade 5 and Grade 7[8] scholarship schemes were introduced to assist able children to utilize secondary and higher education opportunities. It may be hypothesized that the 2500–3000 scholars selected on the basis of an all-island competitive examination are among the upper range of 'ability' in each age group and that accordingly the majority of these scholars were likely to find their place among the 4000 secondary school students who gain admission to the university each year. A recent survey of the academic progress of the 1970 group of 2446 Grade 7 scholarship winners showed that only 9.9% had entered the University in 1977 – the first year in which they were likely to do so – and subsequently 8.9% of

8· Scholarships were awarded on an examination held at grade 7 from 1969 to 1976,

this group had gained admission in 1978 and 4.4% in 1979[9]. Three-fourths of these scholars have therefore not entered the University. The reasons for this situation are evidently many and varied, and includes 'dropping-out', and this educational wastage and frustration of aspirations are also negative features of educational opportunity in Sri Lanka.

Imbalances

As the sex-wise data in Tables 1, 2 and 3 show, sex disparities in educational participation at school level are minimal in Sri Lanka as a result of the policy of equal access to education supported by free education facilities for both sexes.

On the other hand marked regional imbalances in educational participation are manifest, clearly reflecting unequal rates of socio-economic development in different regions (Table 7). It will suffice here to cite two examples.

(i) Crucial to the problem of educational opportunity and to the relationship between education and the socio-economic environment is the fact that early school leaving ('dropping out') rates in primary and secondary schools are high in the Eastern and Uva provinces and that half the educational districts, including some which are contiguous to Colombo district, have a relatively high rate of 'dropping out' from Grade 5 and from the secondary school (Table 6).

(ii) The low level of participation in Grades 11 and 12 Science classes, the main avenue to socio-economic mobility in Sri Lanka, in 15 of 26 districts (Table 7) is a disquieting feature calling for dynamic measures and even positive discrimination in regional socio-economic development policies and in the organization of well - equipped district senior secondary schools. The present scheme of basing selection on district quotas is a short-term measure and is hardly an effective substitute for reducing disparities and equalizing opportunities at school level.

Within regions, income disparities adversely affect educational participation and achievement. National level data from the last socio-economic survey (Table 8) points to relatively wide differentials in participation in education particularly in the upper levels of the school system and to low participation in post-secondary education of students from income groups below Rs. 600/- a month.

9. Achievement and under-achievement in Sri Lanka - Longitudinal Study of the Navodaya Scholarship Winners of 1970 - Jayaweera S. and R. Gunawardena. Unpublished Study by Department of Social Science Education, Faculty of Education, University of Colombo (1979).

TABLE 7

Enrolment by Districts 1977 (Percentage Distribution)

Educational Districts	Population Distribution	Grades 1 – 12 Total enrolment % Distribution	% Distribution Male	% Distribution Female	Enrolment Grade 11 – 12 Sc. % Distribution	Male enrolment Grade 11 – 12 Sc. % Distribution	Female enrolment Grade 11 – 12 Sc. % Distribution
1. Colombo South ..	20·9	8·3	7·8	8·3	19·2	18·5	19·9
2. Homagama ..		3·1	3·3	3·1	3·0	3·1	2·8
3. Colombo North ..		6·0	6·0	6·0	6·4	6·6	6·1
4. Minuwangoda ..		3·4	3·5	3·4	2·0	2·0	1·9
5. Kalutara ..	5·7	5·4	5·5	5·4	5·5	4·7	6·4
6. Kandy ..	9·3	8·3	8·2	8·3	9·0	8·9	9·0
7. Matale ..	2·5	2·5	2·5	2·5	1·9	2·1	1·6
8. Nuwara Eliya ..	3·5	3·5	2·9	3·5	0·9	0·9	0·8
9. Galle ..	5·7	5·9	6·1	5·9	7·7	8·2	7·0
10. Matara ..	4·6	5·0	5·3	5·0	4·5	4·6	4·4
11. Tangalle ..	2·7	3·0	3·1	3·0	1·5	1·5	1·6
12. Jaffna ..	5·6	6·3	6·3	6·3	15·9	15·8	16·0
13. Mannar ..	0·6	0·7	0·7	0·7	0·4	0·5	0·3
14. Vavuniya ..	0·8	0·8	0·8	0·8	0·4	0·5	0·3
15. Batticaloa ..	2·1	1·9	2·0	1·9	1·8	2·6	1·0
16. Amparai ..	2·2	0·9	0·9	0·9	0·2	0·2	0·1
17. Kalmunai ..	2·2	1·6	0·8	1·6	0·9	1·1	0·7
18. Trincomalee ..	1·5	1·6	1·7	1·6	0·8	1·2	0·3
19. Kurunegala ..	8·1	7·3	7·4	7·3	6·5	6·1	6·9
20. Chilaw ..	3·0	4·4	4·6	4·4	2·3	2·4	2·2
21. Anuradhapura ..	3·1	3·6	3·8	3·6	0·7	0·8	0·5
22. Polonnaruwa ..	1·3	1·5	1·5	1·5	0·4	0·5	0·4
23. Bandarawela ..	4·9	3·3	2·9	3·3	1·4	1·2	1·6
24. Moneragala ..	1·6	1·2	1·6	1·3	0·2	0·2	0·1
25. Ratnapura ..	5·1	4·6	4·6	4·6	1·9	1·6	2·3
26. Kegalle ..	5·2	5·3	5·2	5·3	4·8	4·3	5·3
Total - SRI LANKA ..	100·0	100·0	100·0	100·0	100·0	100·0	100·0

Source: Based on School Census data, Ministry of Education, 1977 and presented in Status of Women: Sri Lanka, Unversity of Colombo (1979), Table 5. 19, pp. 290.

TABLE 8

Participation Rate in Education by Household Income (1970)

Income	Age 5 – 9	Age 10 – 14	Age 15 – 19	Age 20 – 24
Less than Rs. 100 ..	61·9	64·7	29·1	6·3
Rs. 100 – 199 ..	68·9	73·9	28·9	2·2
Rs. 200 – 399 ..	75·8	81·3	36·1	6·5
Rs. 400 – 599 ..	79·6	85·7	48·7	6·5
Rs. 600 – 799 ..	85·6	85·6	57·5	16·6
Rs. 800 – 999 ..	76·3	83·8	55·3	22·2
Rs. 1000 & over ..	85·8	81·3	61·5	19·9
All groups ..	73·8	79·3	38·8	6·8

Source: Socio – Economic Survey 1969/79, Dept. of Census and Statistics.

The effect of disparities in school facilities and other environmental factors is further seen in the concentration of university entrants from low income groups in arts courses. Data relating to the 1976 university entrants indicates that 76·4% of the entrants from families with monthly incomes of over Rs. 600/- and only 25·1% of the entrants from families with a monthly income less than Rs. 600/- gained admission to science courses.[10] Since arts courses in most instances lead to less remunerative employment and even to unemployment, inequalities in educational opportunity have significant repercussions even for those who are able to complete their secondary education.

Currently the Indian Tamil and Muslim communities in Sri Lanka are also educationally disadvantaged groups as a result of historical and cultural factors.

National or even regional data are often misleading in that they contribute to generalizations which mask the gravity of the problem of inequalities and deprivation in specific geographical areas or social groups. Micro-studies have been few but they provide a corrective to such generalizations. A very high incidence of early leaving has been found for

10· Based on data in "University Admissions 1976 – A Report on the Background Characteristics of the Entrant Population", Planning and Programming Division, Ministry of Education.

instance, in economically and socially underprivileged neighbourhoods such as urban shanty settlements and remote villages.[11] Recent studies in agricultural settlements such as Minipe[12] and the Mahaweli area[13] have shown that the economic value of child labour in agricultural communities, particularly during times of peak activity, have led to absenteeism and withdrawal of children from school partly as a result of the rigidity of educational organization and insensitivity to varying social needs.

Determinants and Policies

Poverty and the consequent inability on the part of parents to maintain their children at school as well as negative attitudes to education have been identified as major causes of non-enrolment in schools and early leaving. Economic constraints have also led to inadequacies in educational provision and facilities from pre-school level to further education. Half the schools in the island (50·5% in 1977) can be classified as "small schools" with meagre facilities and with enrolments ranging from less than 50 to 200 students. Many of these schools are found in less developed districts where geographical factors also limit the access of these children to secondary and senior secondary schools within these districts. Imbalances in the supply of qualified teachers in crucial areas such as mathematics, science and languages, and in the provision of laboratory facilities and other educational equipment further bedevils the issue of educational opportunity.

Compounding the consequences of these economic constraints are the lacunae in policies directed towards universalizing educational opportunities. Free education was introduced over three decades ago but supportive legislation is lacking and priority has yet to be directed to the most needy in introducing complementary socio-economic measures.

Section 12 of the Constitution permits the adoption of special measures for the advancement of children, but contrary to popular assumption there is no national legislation in operation enforcing compulsory education at any level in Sri Lanka. The 1939 Education Ordinance[14] empowered the Executive Committee of Education of the State Council to

11· Kariyawasam T., A Study of Early School Drop-outs in the Secondary Schools of Underprivileged areas in the City of Colombo, Y. M. C. A.; 1976

12· Wanigaratne R. D. Development of the Minipe Colonization Scheme, Research Study Series No. 29 Agrarian Research and Training Institute, Colombo, 1978.

13· Dr. Percy Silva, Dr. Jayanthi Perera and Mr. W. N. Wilson, Dept. of Geography, University of Colombo, National Science Council Man and Biosphere Project in the Mahaweli New Settlement areas (on-going).

14· Education Ordinance No. 31 of 1939, Part V Sec. 32, (Govt. Press).

make regulations enforcing compulsory education and with the change to Parliamentary government the Education Ordinance empowers the Minister to make regulations in respect of compulsory education,[15] but no laws or regulations have been introduced subsequently.

Legislation that cannot be enforced through lack of school facilities or economic difficulties may appear to serve little purpose, but it is always possible to enforce such legislation initially in areas where schools are available within a reasonable distance, with provision for exemption where necessary. A positive policy in this respect will lead to greater awareness of the problem of non-school going children and to the adoption of ancillary measures at local and national level to assist children from underprivileged families to utilize available facilities.

Similarly the provision in The Employment of Women, Young Persons and Children Act[16] relating to the prohibition of the employment of children under 14 years has never been enforced, thereby leading to the exploitation of young children in what is, in some instances, virtual slave labour. Legislation to enforce even minimum part-time educational facilities for those who are compelled to seek employment have yet to be implemented in relation to the educational needs of these children.

Concern has generally tended to be directed to over-all policies, and in implementation, to only those in the "pipe line" within the education system who are often the children from the more developed areas and from articulate sections of the community. Alternate measures to reach those who are outside the system – who have failed to enter it or who have 'dropped out' of it – have not received adequate attention. In Sri Lanka non-formal education has been conceived largely in terms of vocational training but educational opportunities even in this area are yet limited. In quantitative terms the total efforts of the Ministry of Education, the National Apprenticeship Board, the Department of Labour, the National Youth Council, the Department of (Small) or Rural Industries and other employment-oriented Ministries and Departments as well as the non-government sector can hardly meet the needs of even a fraction of the non-school going population who form almost half the school age population, which in turn constitutes approximately half the population of the country.

15. The above Ordinance as amended, Part V. Sec. 37, Government of Ceylon, Legislative Enactments, Govt. Press.

16. The Employment of Women, Young Persons and Children Act No. 47 of 1956.

Many economically developing countries have experimented with alternative strategies and organizational patterns to extend educational opportunities to children from low income families. Some of these have been introduced as pilot projects but their innovative features offer possibilities of adaptation.

Within the education system efforts have been made in the Asian and Pacific region to synchronize school vacations with agricultural seasons and to shorten school hours to enable children who have domestic and occupational responsibilities to continue to attend school. Multiple points of entry and re-entry have been accepted in some countries so that children who have not been to school or have 'dropped out' can enter it at a further point after preparation through non-formal programmes. For instance, both in the Philippines and Thailand 'second chance' programmes are provided to enable children to re-enter the education system at second level, and it is proposed to extend this system to primary schools also.[17]

Outside the formal education system part-time education facilities are provided in many Asian countries to assist early school leavers to continue their education. In the Philippines, Learning Centres are organized in schools and churches, evening primary classes are held in Manila for school drop-outs and multigrade classes in remote areas for out-of-school children.[18] The National Council of Educational Research and Training in India has made preparations to introduce part-time educational facilities for 6 to 14 years old children who have not been to school or who have 'dropped out' to seek employment.[19] The Undeprivileged Children's Education programme begun in 1973 in Bangladesh offers a shortened primary education including craft training to children who work as hawkers, sweepers, labourers and waiters and Indonesia has its Development Learning Centres. The problem of inadequate facilities in remote areas has been countered in economically developed (Australia) and developing countries (India and Papua New Guinea) by the use of itinerant teachers or by distance education programmes using correspondence courses, radio and television.

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17. Education in Asia and Oceania – Progress and Prospects E. D. – 78 / MINEDASO 3, 1978.

18. Asian Programme for Education Innovation and Development. Report of Programme Development Meeting, April – May 1977, Unesco, Bangkok, 1977.

19. Non-formal Education for Drop-out Children and Rural Development-National Council of Education Research and Training, New Delhi, 1977.

In Sri Lanka such efforts have been rare largely because both public and official attention have been focussed on the formal system and have tended to be oblivious of the needs of those who have been pushed or left out of this system.

Some Consequences

Some implications of the neglect of the problem of educationally deprived children are seen in the numbers of children who have lost their minimum 'rights' as spelt out in the Declaration and whose unfortunate position is reflected even in the inadequate statistics available in Sri Lanka.

Literacy rates in Sri Lanka increased consistently till 1963 but only the rural female literacy rate registered an increase from 1963–71, while urban literacy showed a slight decline. Literacy figures in different Census Reports need to be interpreted cautiously. Nevertheless the decline in literacy rates of school age groups (Table 9) is a pointer to the fact that the proportion of children receiving even a minimal education to ensure functional literacy has decreased. Between 1963 and 1971 (the last Census year) there was a perceptible decline in urban and rural male and female literacy among 10–14 year olds. A similar decline was noted among urban males and females and rural males of the 15–19 years age group. The impact of the declining enrolments of the nineteen seventies on literacy has yet to be seen.

Labour force statistics (Table 10) indicate that the number of children aged 10–14 in the labour force decreased from 1946 to 1963 inevitably as a result of increasing school enrolment, and more slowly from 1963 to 1971 while the activity rate of this age group declined from 13% in 1946 to 6·2% in 1963 and to 5% in 1971. In economically developing countries in Africa and Asia the labour force activity of children of this age is relatively high while it is insignificant in industrialized countries, and this disparity reflects differences in economic growth rates and in the structure of the economy.

Nevertheless the fact that 80,729 children (49,400 boys and 31,329 girls) in Sri Lanka between 10 and 14 years were in the labour force in 1971, in a country in which part-time education facilities for this age group are practically non-existent, illustrates the sad plight and bleak future of a sizeable proportion of children. Of this number 33·3% of the boys and 41.9% of the girls were classified as belonging to the large pool of unemployed youth in the country.

TABLE 9

Literacy Rates

Age Group	1946			1953			1963			1971		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Total 10 – 14 ..	68·6	54·9	61·9	81·9	69·8	76·1	86·6	82·7	84·7	83·7	82·3	83·0
15 – 19 ..	79·5	59·0	69·9	83·5	66·3	75·2	90·3	82·2	86·3	88·3	85·1	86·7
Urban 10 – 14 ..	74·6	68·0	71·5	86·0	82·9	84·6	91·5	90·3	90·9	88·4	87·6	88·0
15 – 19 ..	84·7	75·1	80·8	90·5	84·2	87·7	94·8	92·1	93·5	92·4	91·0	91·7
Rural 10 – 14 ..	67·7	52·9	60·5	81·3	67·7	74·7	85·6	81·1	83·4	82·4	80·9	81·7
15 – 19 ..	78·3	65·0	67·8	82·0	63·2	72·8	89·1	79·8	84·5	87·0	83·4	85·2

Source: Census of Ceylon 1946, 1953, 1963, 1971, Dept. of Census, Colombo.

TABLE 10

No. of Children aged 10 – 14 years in the Labour Force and Activity Rates

Age group 10 – 14 years	1946	1953	1963	1971
Labour Force (Nos.)				
Total	104,502	92,488	82,758	80,729
Male	58,491	48,207	55,025	49,400
Female	46,011	44,281	27,733	31,329
Activity Rate (%)				
Total	13·0	10·2	6·2	5·0
Male	14·1	10·5	8·1	6·0
Female	11·8	9·9	4·3	4·0

Source: Census of Population Sri Lanka, 1971, Dept. of Census and Statistics.

Area and micro-studies of colonization schemes have shown that a large proportion of children under 14 years of age are full-time or part-time agricultural workers. In the sample survey in Minipe, 41% of the population between 6 and 14 years of age did not attend schools and 98% of these were full-time or part-time helpers in agriculture and in household family duties[20]. It is apparent that children in the labour force are engaged chiefly as casual labour in the rural and urban sectors. An interesting feature of the census data, however, is that the urban activity rate is higher than the rural activity rate for the age group 10 to 14 years, whereas the rural rate is higher in all other age groups. This difference may be indicative of the prevalence of exploitation of child labour in domestic service and in ill-paid jobs in the informal sector in urban areas. Physical and psychological cruelty are often concomitants of such exploitation.

Another facet of the status of children under 14 years of age can be seen in the distribution of children by activity in 1971 in Table 11. The unemployed proportion of this age group had increased in contrast to the decline in the proportion of the employed and a significant increase was seen in those classified as "others" from 9.7% in 1963 to 15.8% in 1971 – that is, those who are not in schools or in the labour force or engaged in household duties. These non-school going 'inactive' children of this vulnerable age group are apt to be victims of circumstances which enmesh them in activities which are detrimental to their own well being and to that of the community.

20· Refer Notes 10 and 11.

TABLE 11

Percentage Distribution by Activity of Children aged 10-14 years

Activity	1963			1971		
	Male	Female	Total	Male	Female	Total
Employed ..	6·5	3·6	5·1	4·0	2·3	3·2
Unemployed ..	1·6	0·7	1·1	2·0	1·7	1·8
Students ..	78·7	71·6	75·2	76·6	71·3	74·0
Engaged in Home Duties ..	3·5	14·3	8·8	1·9	8·6	5·1
Others ..	9·6	9·9	9·7	15·5	16·2	15·8
Total ..	100·0	100·0	100·0	100·0	100·0	100·0

Source: Census of Population Sri Lanka, 1971 Dept. of Census and Statistics.

According to available statistics a small proportion of children are currently accommodated in welfare institutions for the physically, mentally and socially handicapped (2634), children's homes (4173), state receiving homes (327), remand homes (334) and certified schools (530)[21] i. e. only 7098 chipdren are in institutions set apart for the handicapped, the homeless and those identified as being prone to deviant behaviour. Only 200 child beggars have been admitted so far to institutions for rehabilitation[22]. These children in institutions form only a minute proportion of the neglected and deprived and of those who need protection from their proclivities in underprivileged and congested areas.

Positive features of the education situation are the social goals of education policies which have survived the vicissitudes of policy-orientation over three decades, the high aspirations of parents and children[23] from all economic strata, and the faith placed by them in education as an agent of individual mobility and advancement. It is opportune now to review the efficacy of the education system in Sri Lanka from the perspective of social justice and to evaluate its outcomes and direct its policies to encompass the needs of that half of the school age population who have failed so far to share the benefits of education and have therefore been exposed to "neglect, cruelty and exploitation". National policies need to be augmented by district level planning and implementation, and the reduction of educational disparities appear to depend largely on integrated district development in which education functions positively as a co-agent of accelerated socio-economic development.

21· Data compiled by the Sri Lanka School of Social Work, Colombo 3 (1979).
22· Ministry of Social Services (1977).
23· Several Studies have found that children and parents in Sri Lanka have high education aspirations e. g. refer Status of Women: Sri Lanka, University of Colombo 1979 pp. 374 – 384.

Sociological Foundations of the Concept of 'State Interest' in Evidentiary Law

G. L. PEIRIS

1. The Sociological Approach to Jurisprudence

One of the major reasons for the decline of public confidence in legal institutions today is the tendency to regard law as a collection of technical rules, or worse, as a mere craft. An essential prerequisite to the understanding of legal rules and legal institutions in their proper perspective is the consideration of a legal system as an integrated whole. The law has to be viewed not as a shapeless mass of disjointed rules remote from life but as an institution which serves the ends of society. This purpose can be achieved adequately only by emphasizing factors of social policy as a crucial aspect of the administration of law. The inadequacy of conceptual analysis alone has been exposed by the sociological jurists whose work has influenced profoundly the avenues of development of modern jurisprudence.

Auguste Comte, who is regarded as the father of the discipline of "sociology", identified and analyzed four modes of social investigation—observation, experiment, comparison and the historical method. The application of these means of investigation to the study of law is typified by the work of the German jurist, Ihering, who expounded the theory relating to the jurisprudence of "interests".[1] His basic thesis was that there is an inevitable conflict between collective and individual interests in society and that the regulation of this conflict is one of the fundamental aims of the law. Ehrlich[2] pointed out that the material, as distinguished from the formal, source of law was discernible not in statutory provisions or in decided cases but in the activities of society. He declared that "The centre of legal gravity lies in society itself."[3] The most sophisticated

1. R. von Ihering, *Law as a Means to an End* (translation by I. Husik, *Modern Legal Philosophy*, series v).
2. E. Ehrlich, *Fundamental Principles of the Sociology of Law* (translation by W. L. Moll), pp. 489–506.
3. See the foreword to the work referred to at note 2, *supra*.

analysis of law, as an instrument for the reconciliation of competing interests, is that of Roscoe Pound.[4] Pound looked upon jurisprudence as a technology and consistently applied the analogy of engineering to social problems.

A striking example of the function of law in modern society, of reconciling the conflict of individual, public and social interests, is provided by the legal principles governing the exclusion of evidence on the ground of jeopardy to the State interest. The cardinal aspects of public policy which come into conflict in this area are: (a) the public interest that harm should not be done to the nation or to the public service; and (b) the public interest that the administration of justice should not be frustrated by the withholding of documents which must be produced if justice is to be done.[5] The body of evidentiary law which has been evolved in this area by the Anglo-American legal tradition is founded on a compromise between divergent objectives of social policy. The purpose of this article is to offer a critical analysis of the foundations on which these legal principles and attitudes are based, as an illustration of the sociological approach to contemporary jurisprudence.

2. The Juridical Character of the Doctrine of Exclusion of Evidence on the Ground of Protection of State Interest

The branch of the law dealing with State interest as a basis of exclusion of evidence has no bearing on the concept of privilege.[6] The distinct character of the rules governing the former area is demonstrable in several ways: (i) the objection to reception of evidence, based on public policy, may be invoked by any person and, indeed, should be taken by the judge *ex mero motu*;[7] (ii) unlike a plea of privilege, the objection of State interest cannot be waived by the Crown or by any other person;[8] (iii) the rule of exclusion deriving from public policy encompasses primary and secondary evidence without discrimination;[9] (iv) the objection of State

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4. R. Pound, *The Scope and Purpose of Sociological Jurisprudence* (1910 - 11) 24 Harvard Law Review 591; (1911 - 12) 25 Harvard Law Review 140, 489; *A Survey of Social Interests* (1943 - 44) 57 Harvard Law Reviw 1; *Sociology of Law and Sociological Jurisprudence* (1943 - 44) 5 University of Toronto Law Journal 1.

5. S. L. Phipson, *The Law of Evidence* (12th Edition, 1976), p. 231, paragraph 562.

6. In *Conway* v. *Rimmer* (1968) A. C. 910 every member of the House of Lords, with the exception of Lord Morris, assailed the nomenclature of "Crown privilege" and expressed a preference for the phrase "public policy".

7. *Hennessy* v. *Wright* (1888) 21 Q. B. D. 509; *Chatterton* v. *Secretary of State* (1895) 2 Q. B. 189.

8. *Rogers* v. *Secretary of State for the Home Department* (1973) A. C. 388.

9. *Hughes* v. *Vargas* (1893) 9 T. L. R. 92; *Gain* v. *Gain* (1961) 1 W. L. R. 1469.

interest cannot be rejected on the ground that the document in question came into existence in pursuance of some criminal or fraudulent purpose.[10]

In view of these special features characterizing the relevant legal principles, they cannot be assimilated with the notion of privilege in evidentiary law and are better conceived of in the setting of broader considerations of public policy which control the admissibility of evidence in judicial proceedings.

3. The Scope of the Exclusionary Rule

The principle has been authoritatively formulated for English law that "Documents otherwise relevant and liable to production must not be produced if the public interest requires that they should be withheld."[11] In a libel action arising from an altercation between two army officers, the production of correspondence between the plaintiff and the War Office and of minutes of a military inquiry was refused. Pollock, C.B., said: "It cannot be laid down that all public documents, including treaties with foreign powers, and all the correspondence that may precede or accompany them, and all communications to the heads of departments, are to be produced and made public whenever a suitor in a court of justice thinks that his case requires such production. It is manifest that there must be a limit to the duty or power of compelling the production of papers which are connected with acts of State."[12]

The least controversial application of this principle is in the area of national security which includes national defence and the conduct of foreign relations. When the defendants, acting under the direction of the Board of Admiralty, refused to produce a letter to their agent on the ground that it contained information concerning the Government's plans with regard to one of the Middle Eastern campaigns of the First World War the objection of the defendants was upheld.[13] In the leading case of, *Duncan v. Cammell Laird & Co., Ltd.*[14] the defendants to a claim for damages for negligence in relation to the construction of submarines successfully resisted, on a direction by the Board of Admiralty, the production of numerous documents in their possession in their capacity as government contractors. The design and structure of submarines, especially when the country was at war, was clearly a matter pertaining to national security.

10. *R. v. Cox and Railton* (1885) 14 Q.B.D. 153; *O'Rourke v Darbishire* (1920) A. C. 581
11. *Duncan v. Cammell Laird & Co.* (1942) A. C. 624 at p. 636
12. *Beat on v. Skene* (1860) 5 H. & N. 838
13. *Asiatic Petroleum Co., Ltd. v Anglo-Persian Oil Co., Ltd.* (1916) 1 K. B. 822 at p. 830.
14. (1942) A. C. 624.

Documents which have been suppressed on the ground of probable injury to State interest include communications between the governor of a colony and its legal or military officers as to the condition of the colony or the conduct of its agents,[15] communications between the governor of a colony and a Secretary of State[16] and communications between a Dominion High Commissioner and the Prime Minister of the Dominion.[17] Similarly, disclosure has been refused in respect of resports of military inquiries[18] and communications of the commander-in-chief of forces abroad with the Government[19] on the ground that national security relates, in a broad sense, to the defence of the nation and the maintenance of good diplomatic relations with foreign States.[20]

There is no doubt that the deliberations of Parliament, the proceedings of the Privy Council and State secrets fall within the purview of the exclusionary rule. Thus, the speeches and votes of Members of Parliament may not be divulged except by leave of the House.[21] The minutes of an examination of witnesses before the Lords of the Council are considered confidential.[22] An Officer of the Tower has been held entitled to refuse to disclose whether a plan of that building, which is produced, is accurate or not.[23]

In *Duncan* v. *Cammell Laird & Co., Ltd.*[24] where the plaintiff sought discovery of documents relating to the submarine *Thetis* including a contract for the hull and machinery together with plans and specifications, and the first Lord of the Admiralty stated that "it would be injurious to the public interest that any of the said documents should be disclosed to any person", there is little scope to impugn the correctness of the decision by the House of Lords that the documents should be excluded, since any of these documents might well have given valuable information to the skilled eye of an agent of a foreign power. However, Viscount Simon took the opportunity to deal with the whole question of the right of the Crown to prevent production of documents in litigation, whether the Crown was a party to the proceedings or not.

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15. *Wyatt* v. *Gore* (1816) Holt N. P. 299; *Cooke* v. *Maxwell* (1817) 2 Stark 183.
16. *Hennessy* v. *Wright*, *supra*; *Wright* v. *Mills* (1890) 62 L. T. 558
17. *Isaacs* v *Cook* (1925) 2 K. B. 391
18. *Home* v. *Bentick* (1820) 2 Brod & Bing. 130
19. *Chatterton* v. *Secretary of State*, *supra*.
20. *R.* v. *Brixton Prison Governor, ex parte Soblens* (1963) 2 Q. B. 243
21. *Plunkett* v. *Cobbett* (1804) 5 Esp. 136; *Chubb* v. *Salomons* (1852) 3 C & K. 75
22. *R.* v. *Layer* (1722) 16 St. Tr. 93.
23. *R.* v. *Watson* (1817) 2 Stark. 116
24. See note 14, *supra*.

The exposition of the law in this case leaves no room for doubt that the test of incompatibility with the public interest is satisfied:

(a) by having regard to the contents of the particular document; or

(b) by the fact that the document belongs to a class which, on grounds of public interest, must as a class be withheld from production.

The doctrine requiring virtually guaranteed secrecy for certain classes of documents has received a wide interpretation in the decided cases. Among documents which have been excluded on this ground by the English courts are confidential reports and plans submitted to the Board of Trade,[25] army medical sheets relating to a soldier,[26] reports as to a collision at sea by a naval captain to the Admiralty,[27] reports by the Inspector-General of Prisons to the Lord Lieutenant of Ireland,[28] police reports under the Irish Crimes Act,[29] documents setting out grounds on which a prisoner received the royal pardon,[30] reports by doctors and prison officers on the mental condition of a prisoner and concerning an assault on a fellow prisoner who claimed damages against the Home Office,[31] correspondence between an officer of Customs and the Board of Commissioners,[32] a communication by a justice of the peace to the Commissioners of the Great Seal or to another justice,[33] a report by an officer of Inland Revenue to his superiors,[34] documents brought into existence within the Customs and Excise Departments for the purpose of fixing an assessment for liability to purchase tax,[35] communications between the Commissioners of Customs and independent third parties for the same purpose,[36] confidential letters commenting on the character of employees at the Mint[37] and communications made by or to the Lord Chamberlain in his official capacity as to persons to be invited to court.[38]

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25. *Mercer* v. *Denne* (1904) 2 Ch. 534.
26. *Anthony* v. *Anthony* (1919) 35 T. L. R. 559
27. *The Bellerophon* (1874) 44 L. J. Adm. 5.
28. *M' Elveney* v. *Connellan* 17 I. C. L. R. 55.
29. *R.* v. *McCormack* Crimes Act Cas. 244; *Ashtown* v. *Waterford* (1908) 42 Ir. L. T. 77
30. *R.* v. *Cobbett* (1804) 2 St. Tr. (N. S.) 789
31. *Ellis* v. *Home Office* (1953) 2 Q. B. 135
32. *Anderson* v. *Hamilton* (1816) 2 Brod. & B. 156.
33. *Fitzgibbon* v. *Greer* (1858) Ir. R. 9 C. L. 294
34. *Hughes* v. *Vargas* (1893) 9 T. L. R. 92.
35. *Crompton (Alfred) Amusement Machines Ltd.* v. *Customs and Excise Commissioners (No. 2)* (1973) 3 W. L. R. 268
36. *ibid.*
37. *Latter* v. *Goolden* (C. A.) 18 November, 1894 cited in *Williams* v. *Star Co.* (1908) 24 T. L. R. 297
38. *West* v. *West* (1911) 27 T. L. R. 189.

On the other hand, documents the exclusion of which has not been necessitated by considerations of State interest are exemplified by letters by a private individual to the Postmaster-General, complaining of the conduct of a postal official,[39] official books indicating the appointment of a collector of property tax[40] and communications between the keeper of a lunatic asylum and the Commissioners in Lunacy.[41]

The high-water mark of the doctrine which requires the keeping of a class of documents secret, irrespective of their contents, is represented by the case of *Broome* v. *Broome*.[42] A wife petitioned for divorce on the ground of adultery. The husband was a regular soldier of non-commissioned rank. An issue in the case related to the circumstances in which the wife was received by the husband on her arrival at his station in Hong Kong. There had been at Hong Kong a representative of the Soldiers, Sailors and Air Force Families Association. Differences had arisen between the husband and wife, and her good offices were invoked. She had made written reports of the case to her head office. The wife issued a *subpoena ad testificandum* directed to the representative of the Association and a *subpoena duces tecum* addressed to the Secretary of State for War relating to documents concerning attempts to reconcile the spouses made by the S.S.A.F.A. The Minister resisted production of the documents. On the basis of the existing authorities[43] Sachs, J. ruled that the principle of exclusion of documents on the footing of State interest could be applied irrespective of where a document originates and in whose custody it is held.

On numerous occasions, however, the English courts have expressed misgivings about the extreme width of the exclusionary rule which is entrenched in the decided cases. *Odlum* v. *Stratton*[44] was an action for libel brought by a farmer against the chairman of a War Agricultural Committee. One of the issues related to the plaintiff's efficiency as a farmer. There were several contemporary records and reports made by the Committee and communications between the Committee and the Minister. The Ministry of Agriculture successfully objected to the production of all these documents, but Atkinson, J. considered that their disclosure would have

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39. *Blake v. Pilford* (1832) 1 Moo & Rob. 198
40. *Lee* v. *Birrell* (1813) 1 M. & S. 482
41. *Hill* v. *Philp* (1852) 7 Exch. 232
42. (1955) 2 W. L. R. 401; cf. J. E. S. Simon, *Evidence Excluded by Consideration of State Interest* 1955 Cambridge Law Journal 62.
43. *Ankin* v. *L. N. E. Railway* (1930) 1 K. B. 527; *Moss* v. *Chesham U. D. C.* 16 January 1945.
44. July 21–29, 1949, quoted by J. E. S. Simon, *op. cit.*, at p. 73

been of the utmost assistance in arriving at the truth. In *Ellis* v. *Home Office*[45] a prisoner in gaol was seriously assaulted by a fellow prisoner. The plaintiff alleged that this was due to the negligence of servants of the Home Office who knew, or should have known, that the assailant was unsafe. The Crown claimed privilege for police reports and medical reports on the behaviour of the assailant before the assault. Devlin J., while dismissing the action, said: "I must express my uneasy feeling that justice may not have been done because the material before me was not complete, and something more than an uneasy feeling that, whether justice has been done or not, it certainly will not appear to have been done." These judicial observations express doubts whether the exclusion of evidence at the instance of the executive might not have an adverse effect on the administration of justice.

These reservations are justified by the result reached in several cases. For example, in a divorce action[46] the issue was whether the husband had contracted syphilis during military service. Both parties wanted production of his military records, but the court upheld the War Office view that the public interest was best served by not producing them.[47] A liquidator who had taken out a misfeasance summons against directors could not have the balance sheets of the company when they were in the hands of the Inland Revenue authorities.[48] The refusal of the Minister of Transport, in an action for damages against a railway company arising out of a railway accident, to let the plaintiff have access to a report on the accident sent by the defendants was upheld[49] although his predecessor, the President of the Board of Trade, had never withheld it from litigants.[50] The protests of the judge at the lack of assistance from the Local Government Board were unavailing in an action for nuisance caused by a smallpox hospital where the report of the inspector of the board was withheld.[51] This trend, which is reflected in some Australian decisions[52], provides justification for the comment that "It is of obvious importance to ensure generally that claims of Crown privilege are not used unnecessarily to the detriment of the vital need of the courts to have the truth put before them."[53]

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45. (1953) 2 Q. B. 135
46. *Anthony* v. *Anthony* (1919) 35 T. L. R. 559
47. cf. *King* v. *King* (1944) Q. W. N. 25
48. *Re Joseph Hargreaves, Ltd.* (1900) 1 Ch. 347; see also *Honeychurch* v. *Honeychurch* (1943) S. A. S. R. 31.
49. *Ankin* v. *L. N. E. Railway* (1930) 1 K. B. 527.
50. *Woolley* v. *N. L. R.* (1869) L. R. 4 C. P. 602.
51. *Attorney-General* v. *Nottingham Corporation* (1904) 1 Ch. 673.
52. See, for example, *Seeney* v. *Seeney* (1945) Q. W. N. 20.
53. *Broome* v. *Broome* (1955) 1 All E. R. 201 at p. 207, *per* Sachs, J.

The wide scope of the exclusionary doctrine, as applied to documents considered to belong to a sensitive class, is attributable to the formulation of the relevant principle by Viscount Simon in the *Cammell Laird* case: "The public interest requires a particular class of communications with, or within, a public department to be protected from production on the ground that the candour and completeness of such communications might be prejudiced if they were ever liable to be disclosed in subsequent litigation rather than upon the contents of the particular document itself."[54] Viscount Kilmuir, L.C., in a statement in the House of Lords on the grounds which justify invocation of Crown privilege, expressly distinguished between the "contents" cases and the "class" cases. Having set out the first ground that disclosure of the contents of the particular document would injure the public interest, he proceeded: "The second ground is that the document falls within a class which the public interest requires to be withheld from production, and Lord Simon particularized this head of public interest as the proper functioning of the public service".[55] The rationale underlying the second ground was stated to be that "Government decisions should be taken on the best advice and with the fullest information."[56]

The unsatisfactory condition of the law, as stated in the *Cammell Laird* case, is due primarily to the failure to take into account the different ramifications of the concept of "public interest" in this area. Viscount Simon relied heavily on the dictum of Lord Parker of Waddington that "Those who are responsible for the national security must be the sole judges of what the national security requires."[57] Viscount Simon's substitution of the phrase "national interest" for "national security" suggests that he regarded the two phrases as synonymous. It is clear, however, that "national interest" is a significantly wider concept than "national security", in that it covers not only the safety of the country but other types of interest, including commercial interests. The distinction between these concepts has been recognized in judicial pronouncements of impeccable authority.[58]

Evaluation of the public interest cannot be governed in all contexts by a uniform and immutable principle. The complexity of the concept and the diversity of the situations in which it becomes relevant as a possible basis for the exclusion of evidence render an inflexible approach of minimal

54. (1942) A. C. 624 at p. 635
55. Statement to the House of Lords on 6 June 1956
56. *ibid.*
57. *The Zamora* (1916) 2 A. C. 77 at p. 107
58. See *Chandler* v. *Director of Public Prosecutions* (1962) 3 W. L. R. 694

value. Broadly, the proposition is maintainable that the considerations which apply in contexts where national defence and good diplomatic relations are thought to be imperilled, can be distinguished entirely from those relevant to situations where evidence is sought to be excluded on the basis that its reception is injurious to some other element of the public interest. For example, it can scarcely be suggested that comparable considerations come into play in a case where publication of the design of a submarine is claimed to endanger the public safety[59] since such publication would enable an enemy agent to become aware that the submarine was equipped with tubes which could fire backwards, and in a case where reception of the medical sheets of a soldier[60] or of evidence relating to attempts at reconciling a soldier with his estranged wife[61] is objected to on the ground of transgression of the public interest.

Gradations and refinements must necessarily be recognized in relation to the component elements of the concept of public interest. An essential feature of the concept is that it comprises several facets, the relative importance of which cannot be determined in the abstract but depends on the nature of the interest which is alleged to be threatened and the extent to which jeopardy to that interest is evident in a given case. The public interest in the due administration of justice is no less vital than the public interest in the protection of the State by the non-disclosure of potentially hazardous information. The subordination of the former interest to the latter needs to be justified by compelling considerations. The central problem in these circumstances is to balance competing interests and to decide which interest should be accorded priority in the light of the exigencies of a particular situation.

There are many cases where the nature of the injury which would or might be done to the nation or the public service is of so grave a character that no other interest, public or private, including the interest in the administration of justice on the basis of uninhibited access to relevant evidence, can be allowed to prevail over it. With regard to such cases it is a proper approach that production or discovery of the document in question would put the interest of the State in jecpardy. However, there are many other cases where the possible injury to the public service is less significant in character and in degree. In these contexts it is altogether appropriate to balance the public interests involved.[62] Consequently, it is not a valid

59. *Duncan* v. *Cammell Laird & Co.* (1942) A. C. 624
60. *Anthony* v. *Anthony* (1919) 35 T. L. R. 559.
61. *Broome* v. *Broome* (1955) 1 All E. R. 201.
62. cf. *Conway* v. *Rimmer* (1968) A. C. 910

principle that the smallest probability of injury to the public service must invariably outweigh the gravest impediment to the administration of justice.

The unwarranted extension of the scope of the exclusionary rule in contexts which do not impinge on national security is to be imputed, in the main, to the facile assumption that, the antipathy in these cases necessarily being between the interest of the individual litigant and the interest of the community as a whole, the latter interest is entitled to precedence. This approach is reflected in the assertion that "The public interest is also the interest of every subject of the realm, and while, in these exceptional cases, the private citizen may seem to be denied what is to his immediate advantage, he, like the rest of us, would suffer if the needs of protecting the interests of the country as a whole were not ranked as a prior obligation."[63] A similar attitude finds expression in the comment that "The public interest must be considered paramount to the individual interest of a suitor in a court of justice."[64]

The fallacy inherent in this approach lies in the identification of the interest in the proper administration of justice as an individual interest. "If the private interest is an interest in securing an adequate remedy for a tort whether committed by a civil servant or otherwise, then it is also the public interest that justice should be administered so that the innocent are compensated for the wrongs done to them by their fellows."[65] It is apparent, then, that the supposed dichotomy between the individual interest and the public interest in this context is misconceived. The integrity of political institutions and the exposure of organs of government to public scrutiny indisputably transcend the range of individual interests and form an integral aspect of the public interest.

Although it is incontrovertible that there is a public interest in the general security and in public safety which is of an overriding character,[66] this interest must be contained within its legitimate ambit. The relegation of a crucial facet of the public interest – that pertaining to availability of the entirety of the relevant evidence to the courts as a foundation for achieving justice between individuals and between the individual and the State – has resulted in an imbalance in the weightage assigned to the different elements

63. *Duncan* v. *Cammell Laird & Co.* (1942) A. C. 624 at p. 643, *per* Viscount Simon
64. *Beatson* v. *Skene* (1860) 5 H. & N. 853, *per* Pollock. C. B.
65. H. Street, *State Secrets: A Comparative Study* (1951) 14 Modern Law Review 121 at pp. 130 – 131
66. R. Pound, *A Survey of Social Interests* (1943) 57 Harvard Law Review at p. 17; cf. *Dusfresne Construction Co., Ltd.* v. *R.* (1935 Ex. 77 at p. 85 *per* Angers, J.

of public policy in this area of the law. It is submitted that some of the deficiencies which have characterized the evolution of the case law of England can be supplied by the formulation of distinct rules catering to different branches of the public interest.

4. Responsibility for Determining the Issue of Public Interest

In the *Cammell Laird* case[67] the House of Lords laid down the proposition that an objection validly taken to production on the ground that it would be detrimental to the public interest is conclusive. Accordingly, it was stated that the court should not require to see the documents for the purpose of itself judging whether disclosure would in fact harm the public interest.

However, even within the British Isles,[68] this view has not been followed consistently. A different approach has been adopted in Scotland. In *Glasgow Corporation* v. *Central Land Board*[69] Viscount Simonds observed: "In the course of the present appeal we have had the advantage of an exhaustive examination of the relevant law from the earliest times, and it has left me in no doubt that there always has been and is now in the law of Scotland an inherent power of the court to override the Crown's objection to produce documents on the ground that it would injure the public interest to do so."[70] Although there are decisions by the Scottish courts[71] which are in line with the *Cammell Laird* ruling, the contrary view is supported by a preponderance of judicial authority in Scotland.[72]

The *Cammell Laird* ruling on this point has not found favour in most Commonwealth jurisdictions.

The Canadian courts have vigorously asserted that the certificate by the executive is subject to judicial scrutiny.[73]

In *Robinson* v. *South Australia State*[74] the State Government had assumed the function of acquiring and marketing all wheat grown in the State and distributing the proceeds to the growers. An action was brought alleging

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67. See note 63, *supra.*
68. See *Re Grosvenor Hotel* (No 2) (1965) Ch. 1233; *Merricks* v. *Nott-Bower* (1965) 1 Q. B. 57; *Wednesbury Corporation* v. *Minister of Housing and Local Government* (1965) 1 W. L. R. 261.
69. (1956) S. C. (H. L.) 1.
70. At p. 11
71. *Earle* v. *Vass* (1822) 1 Shaw's App. 229; *Admiralty Commissioners* v. *Aberdeen Steam Trawling and Fishing Co.* (1909) S. C. 335.
72. See *Henderson* v. M' *Gown* (1916) S. C. 821 and the cases cited in the judgment.
73. *Re Geldart's Dairies Ltd.* (1950) 3 D. L. R. 141 at p. 144; *R.* v. *Snider* (1953) 2 D. L. R 9; *contra: Weber* v. *Pawlik* (1952) 2 D. L. R. 750
74. (1931) A. C. 704

negligence in carrying out this function. The Privy Council remitted the case to the Supreme Court of South Australia with a direction that "it is a proper one for the exercise by that court of its power of itself inspecting the documents for which privilege is set up in order to see whether the claim is justified."[75]

A similar conclusion has been reached in other Australian decisions. Where a police officer who had given evidence before a Magistrate on a charge of illegal betting declined on the direction of his superiors to produce vouchers directly relating to his evidence, and where an affidavit from the Chief Secretary of Victoria was tendered to the Magistrate in which the Minister objected to the production of the document, the Supreme Court of Victoria endorsed the reasoning in *Robinson's* case.[76] The courts of Queensland have taken the same view.[77] Some difficulty was caused by the ruling of the High Court of Australia that it would follow decisions of the House of Lords even to the extent of overruling its own decisions.[78] It is clear, however, that the Australian courts have shown little enthusiasm in following the decision of the House of Lords in the *Cammell Laird* case.

The Court of Appeal in New Zealand[79] has adopted the ruling in *Robinson* v. *South Australia State* in preference to that in the *Cammell Laird* case.

The balance of authority in the United States of America is in conflict with *Cammell Laird.* The American Supreme Court has declared: "Judicial control over the evidence in a case cannot be abdicated to the caprice of executive officers."[80] Where the Treasury refused to produce the correspondence relating to a suit for breach of contract and relied on an opinion of the Attorney-General that the certificate of the head of the department was conclusive, production of the correspondence was ordered.[81] In keeping with American authority[82] the objection predicated on State interest, *per se,* will not absolve a department from disclosing information within its knowledge.[82] Although the cases cannot be reconciled entirely,[83]

75. At p. 723
76. *Bruce* v. *Waldron* (1963) V. R. 3
77. *Queensland Pine Co.* v. *Commonwealth of Australia* (1920) St. R. Qd. 121
78. *Piro* v. *Foster & Co. Ltd.* (1943) 68 C. L. R. 313
79. *Corbett* v. *Social Security Commission* (1962) N. Z. L. R. 878.
80. *United States* v. *Reynolds* (1952) 345 U. S. 1 at pp. 9 – 10 *per* Vinson C. J.
81. *Robinson* v. *United States* (1915) 50 Ct. Cl. 159
82. *Fleming* v. *Bernardi* (1941) 1 F. R. D. 624
83. *United States* v. *General Motors Corporation* (1942) 2 F. R. D. 528; *Walling* v. *Comet Carriers Inc* (1944) 3 F. R. D. 442; *Bowles* v. *Ackerman* (1945) 4 F. R. D. 260

they support the proposition that the Government can properly be compelled to produce files if their relevance is manifest and if no other privilege militates against production.

The Appellate Division in South Africa has declined to treat the Minister's certificate as conclusive.[84]

Judicial attitudes in the Commonweath and in the United States probably influenced the decision in *Conway* v. *Rimmer*[85] where the House of Lords unanimously distinguished the *Cammell Laird* case. This was an action for malicious prosecution brought by a former police probationer who had been charged with, and acquitted of, theft, against his former superintendent who had caused the charge to be brought. Contrary to the wishes of both parties, the Home Secretary objected to the production of the five reports mentioned in the defendant's list of documents. Four of these reports related to the plaintiff's conduct as a probationer, and the other was made to the Chief Constable for transmission to the Director of Public Prosecutions in connection with the charge of theft. The House of Lords ordered production of the documents for inspection by them and, after inspection, they ordered production to the plaintiff.

The *ratio decidendi* underlying the separate opinions of the five Law Lords is contained in the statement by Lord Morris: "Whenever an objection is made to the production of a relevant document, it is for the court to decide whether or not to uphold the objection. The power of the court must include a power to examine documents privately, there being no difference in principle between contents cases and class cases."[86] This decision, by releasing the English courts from the thraldom of "the Simon dragnet doctrine",[87] has "brought back into legal custody a dangerous executive power".[88] The decision in *Conway* v. *Rimmer* has been applied unreservedly by Commonwealth courts.[89]

The crucial issue is whether it is the executive or the judiciary which should bear the responsibility for determining the question of public interest. Various considerations have been urged in support of the conclusion, reached in the *Cammell Laird* case, that this function falls within

84. *Van der Linde* v. *Calitz* (1967) (2) S. A. 239
85. (1968) 1 All E. R. 874.
86. At p. 900.
87. C. K. Allen in (1964) 80 Law Quarterly Review at p. 159.
88. H. W. R. Wade in (1968) 84 Law Quarterly Review at p. 173.
89. *Pollock* v. *Pollock and Grey* (1970) N. Z. L. R. 771, *McFarlane* v. *Sharp* (1972) N. Z. L. R. 64.

the purview of the executive. Firstly, it has been contended that a judge could only consider this matter in public, and that argument in open court as to the admissibility of the document would vitiate the very objectives which are sought to be attained by exclusion of the evidence. Nevertheless, prior to the *Cammell Laird* decision, no impropriety was thought to attach to examination of documents in the judge's chambers.[90] Secondly, it has been said that if the judge sees documents without their being shown to the parties, this would amount, when the Crown is a party, to communicating with one party to the exclusion of the other. This objection is devoid of merit. "Where a document has not been prepared for the information of the judge, it seems to be a misuse of language to say that the judge 'communicates with' the holder of the document by reading it."[91] Thirdly, the argument has been used that, where "policy" is concerned, "it is for Ministers and not for the courts to judge and the Ministers must discharge their responsibilities under the control of Parliament."[92] The danger here is that the word "policy" will be used as a blanket justifying the executive claim to a monopoly of discretionary decisions by reliance on the constitutional canon of political responsibility.[93]

In terms of an assessment of conflicting policy objectives, it is evident that acceptance of the certificate by the executive as conclusive is fraught with considerable danger to the freedom of the individual, especially in the light of rules of practice which are currently entrenched. Although the rule was originally formulated that the decision to object should be taken by the Minister who is the political head of the department and that he should himself have seen and considered the contents of the documents and himself have formed the view that on grounds of public interest they ought not to be produced,[94] greater latitude has been conceded to the executive recently. Thus, it has been considered sufficient if the affidavit is made "by anyone else of sufficient authority and responsibility to be entrusted with the task."[95] The effect of this principle is to confer on the

90. *Asiatic Petroleum Co., Ltd.* v. *Anglo-Persian Oil Co., Ltd.* (1916) 1 K. B. 822, *per* Scrutton, J.; *Spigelman* v. *Hocken* (1933) 50 T. L. R. 87, *per* Macnaghten, J.

91. *Conway* v. *Rimmer*, *supra*, for Lord Reid.

92. See the speech by the Attorney - General during the second reading of the Crown Proceedings Bill, 1947, in the House of Commons, Hansard, volume 439, No. 135, column 1691.

93. H. Street, *State Secrets: A Comparative Study* (1951) 14 Modern Law Review 121 at p. 133

94. See *Duncan* v. *Cammell Laird & Co.*, *supra*

95. *Crompton (Alfred) Amusement Machines, Ltd.* v. *Customs and Excise Commissioners* (No. 2) (1972) 2 Q. B. 102 at p. 113, *per* Lord Denning, M. R.; cf. *Ronnfeldt* v. *Phillips* (1918) 34 T. L. R. 556

executive a measure of discretion, the magnitude of which cannot but result in erosion of interests which represent vital component elements of public policy in this area.

The acceptable method of arriving at equilibrium between conflicting aspects of the public interest is to allocate final responsibility to the judiciary, subject to closely defined qualifications. Except in cases where detriment to the national defence or to the conduct of diplomatic relations is alleged, the interest of the State in non-disclosure is to be viewed as one aspect of the public interest the totality of which requires to be comprehensively assessed, in the setting of the facts of the particular case, by the courts. The validity of this approach is reinforced by the consideration that the view of the executive may frequently be taken from a narrow departmental angle and could, therefore, quite easily assume an insular quality.

Consequently, it is a satisfying solution that the courts should hold the balance between the public interest, as expressed by a Minister, to withhold documents or other evidence, and the public interest in ensuring the proper administration of justice. This does not involve the attachment of trifling weight to the view of the executive. The view has been taken in England that, although the Minister's affidavit is not conclusive, the court will rely on it greatly.[96] In the United States it has been expressly recognized that the opinion of the departmental head will carry great weight.[97] The prevailing rule is that careful consideration must be given to the Minister's view in every case, and "if the Minister's reasons are of a character which judicial experience is not competent to weigh, then the Minister's view must prevail."[98] Notwithstanding that the "contents" cases and the "class" cases are not distinguishable by reference to any general principle, it is in the highest degree improbable that if a Minister certifies that disclosure of a particular document would be contrary to the public interest, any court would be inclined to go behind the certificate.[99]

The differences between the ramifications of the concept of "public interest", in their practical application, indicate the desirability of spelling out distinct criteria facilitating a solution which derives from the balancing of competing interests in divergent contexts. In this respect, the structural framework of codified Asian systems founded on the Indian Evidence Act, 1872, is seen to be of intrinsic value.

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96. *Rogers* v. *Secretary of State for the Home Department* (1973) A. C. 388
97. *Pollen* v. *Ford Instrument Co.* (1939) 26 F. Supp. 583
98. *Conway* v. *Rimmer, supra, per* Lord Reid
99. R. Cross, *Evidence* (4th edition, 1974), p. 272

The sections of the Evidence Ordinance of Sri Lanka[100] which provide for the exclusion of evidence under the head of "Affairs of State and Allied Matters", place the relevant principles in three distinct groups:

(i) There is an absolute prohibition (section 123) against the production of unpublished official records relating to "affairs of State", except with the permission of the appropriate executive authority;

(ii) A public officer has the right to withhold from evidence communications made in official confidence when he considers that the public interest would suffer by the disclosure (section 124);

(iii) Certain "law enforcement officers" have the right to withhold the source of information as to the commission of offences (section 125).

This mode of formulating the applicable law serves the purpose of emphasizing the operation of two distinct principles. So far as section 123 is concerned, the statement or document must be necessarily excluded if the objection, properly phrased, is taken by the appropriate authority. The court has no jurisdiction to inquire into the sufficiency of the grounds alleged. But the position is otherwise under section 124. When a public officer objects to the production of a document on the ground that it is a communication made in official confidence, the court has jurisdiction, under section 124 read with section 162 (2), to inspect the document and to admit it in evidence if it is of opinion (a) that the communication was not made in official confidence, or (b) that the public interest would not suffer by the disclosure of the communication.[100a] The second question can arise for determination only after the court accepts that the communication was made in official confidence, but the issue as to prejudice to the public interest is one which the court is entitled to decide for itself.

It would seem that section 123 envisages a limitation of the court's inquiry to the question whether the record pertains to "affairs of State". Once this question is answered in the affirmative, a certificate from the appropriate authority deprives the court of its right of inspection.

In the setting of the principle embodied in section 123, then, judicial control of executive discretion is rigidly circumscribed. This residual control, however, has been exercised effectively by the courts of Sri Lanka. The

100. No. 14 of 1895. 100a See the case cited at note 107, *Infra*.

question has been considered whether registers prepared under the Waste Lands Ordinance relate to "affairs of State".[101] It has been held that the record of a speech made in public by a candidate for election or his agent is not an unpublished official record relating to "affairs of State".[102] The fact that it is taken down by a police officer and forwarded to his superior or recorded in the information book has been considered not to alter the character of the document.[103]

The concept of "affairs of State" has been significantly curtailed by the view reflected in Sri Lankan[104] and Indian[105] decisions that "affairs of State" cannot be construed as being synonymous with "State or Government business" and that the phrase denotes exclusively matters relating to diplomacy, statecraft and public administration. In regard to police reports of speeches made at election meetings, there is a *cursus curiae* in Sri Lanka that these reports do not concern "affairs of State" and may be validly produced.[106]

As for section 124 which deals with "communications made in official confidence", it has been held that this expression includes not merely inter-official correspondence but also correspondence by members of the public with government officials.[107]

The fundamental contrast offered by English law is that, within the framework of that system, matters provided for by sections 123 and 124 of the Evidence Ordinance of Sri Lanka are enveloped within the scope of a single principle. Thus, the rule has been formulated for English law that "Witnesses may not be asked, and will not be allowed to state, facts or to produce documents, the disclosure of which would be prejudicial to the public service; and this exclusion is not confined to official communications or documents but extends to all others likely to prejudice the public interest."[108]

The expedient of stratification of the different elements of public policy—which is a feature of the Asian systems modelled on the Indian Evidence Act—bears comparison with the approach of the American Law Institute to the compilation of the Model Code of Evidence.[109] A distinction

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101. *Dias* v. *Special Officer* (1928) 30. N. L. R. 129
102. *Daniel Appuhamy* v. *Illangaratne* (1964) 66 N. L. R. 97
103. *ibid*
104. *ibid*
105. *Dinbai* v. *Dominion of India* (1950) A. I. R. East Punjab 228
106. See, for example, *Illangaratne* v. *de Silva* (1948) 49 N. L. R. 169 at p. 173; *Don Philip* v. *Illangaratne* (1949) 51 N. L. R. 561 at p. 562
107. *Keerthiratne* v. *Gunawardene* (1956) 58 N. L. R. 62
108. S. L. Phipson, *Law of Evidence* (9th edition), p. 196
109. Philadelphia, 1942, Rules 227 and 228.

is drawn there between "secrets of State" and "official information". The former is defined as "information not open or theretofore officially disclosed to the public concerning the military or naval organization or plans of the United States, or a State or Territory, or concerning international relations". "Official information" means "information not open or theretofore disclosed to the public relating to internal affairs of a State or of the United States acquired by a public official in the course of his duty".[110] Unless either the judge finds that it is not a "secret of State" or the head of a department consents to its disclosure, a secret of State must not be disclosed, and a judge is empowered to prevent its disclosure even if both parties are willing.[111] "information" is not to be disclosed if the judge finds that it is "official information" and also if its disclosure "will be harmful to the interests of the government of which the witness is an officer in its governmental capacity". The distinction between "secrets of State" and "official information" is supportable on the basis that it permits judicial surveillance over executive discretion in varying degrees, depending on the context in which the problem arises.

The cardinal merit of the approach typified by the Indian Evidence Act and the American Model Code of Evidence, as contrasted with the structural framework of English law, is that an amorphous head of public policy governed by a uniform principle of exclusion of evidence has been valuably replaced by a combination of rules which are conducive in greater degree to differences of approach and emphasis being accommodated in dissimilar factual contexts.

5. Techniques for Restricting the Scope of the Exclusionary Doctrine

A major impetus towards restricting the dimensions of the exclusionary rule is provided by the realization that "A court which abdicates its inherent function of determining the facts upon which the admissibility of evidence turns will furnish to bureaucratic officials too ample opportunities for abusing the privilege".[112] In pursuit of the objective of demarcating the confines of the exclusionary rule based on State interest, judicial initiative has extended to the employment of several techniques:

(a) A necessary condition of exclusion of evidence is that there must be some connection between the claim to exclusion and the central Government.[113] Where, for instance, the validity of a notice requisitioning

110. *ibid.*
111. H. Street, *op. cit.*, p. 134
112. J. H. Wigmore, *Treatise on the Anglo-American System of Evidence in Trials at Common Law* (3rd edition, 1940), Volume 8, p. 799.
113. R. Cross, *Evidence* (4rd edition, 1974), p. 269

a house was in issue, the English courts showed no reluctance in rejecting the corporation's claim to exclude their interdepartmental communications in the public interest.[114] Although there are now in England, as in many other countries, large public bodies such as British Railways and the National Coal Board, the efficient functioning of which has an immediate bearing on the public interest, the Attorney-General conceded in his submissions to the House of Lords in *Conway* v. *Rimmer*[115] that Crown privilege was not and could not be invoked to prevent disclosure of similar documents made by them or their servants, even if it were said that this was required for the proper and efficient functioning of that public service. In view of the rapid proliferation of public corporations and comparable institutions today, particularly in Asian and African countries which are in the process of developing a mixed economy, this limitation on the scope of the rule of exclusion is of practical importance.

(b) The question arises whether the distinction between documentary evidence and oral testimony may properly be exploited as a means of enhancing the manoeuvrability available to the courts in circumstances where the rules applicable to one of these categories of evidence are thought to be characterized by excessive rigidity.

In the *Cammell Laird* case Viscount Simon entertained no doubt that a distinction could not be made for this purpose between oral and documentary evidence: "The same principle must apply to the exclusion of oral evidence which, if given, would jeopardize the interests of the community."[116] Nevertheless, in *Broome* v. *Broome*[117] the rule of exclusion applicable to documentary evidence was held not to inhibit the reception of oral testimony, except possibly, secondary oral evidence of excluded documents. However, this aspect of the decision in *Broome* v. *Broome* should be considered *per incuriam*, since no reference was made to previous judicial authority to the contrary.[118] The need to recognize a distinction between documentary evidence and oral evidence in this context was felt by Sachs, J., because, at the time *Broome's* case was decided, the *Cammell Laird* ruling was fully operative and the English courts considered the endeavour worthwhile to repudiate, in regard to oral evidence, a fetter which had been compulsorily imposed as to the reception of documentary evidence in a manner which stultified balanced value – judgments on the part of the

114. *Blackpool Corporation* v. *Locker* (1948) 1 K. B. 349 at p. 379
115. *Supra*
116. (1942) A. C. 624 at p. 643
117. *Supra*
118. *R.* v. *William Cobbett* (1831) 2 St. Tr. (N. S.) 789, *per* Lord Tenterden. However, the case of *R.* v *Baynes* (1909) 1 K. B. 285 was convincingly distinguished on the facts.

courts as the basis of reconciling conflicting elements of public policy. The usefulness of this distinction has been eliminated by the decision of the House of Lords in *Conway* v. *Rimmer* which resuscitates the doctrine of judicial control of the admissibility of evidence in these cases. The principle is settled today that, where documentary evidence is excluded on the ground of repugnance to the State interest, oral evidence of any kind — whether it relates to the excluded documents or to other matters — is equally barred.

No distinction is defensible from the standpoint of policy between types of secondary evidence — namely, secondary oral evidence of documents the production of which is incompatible with the public interest and oral testimony of other facts the proof of which is precluded on the identical footing. It is anomalous in principle to recognize a rule which, while excluding evidence of the former, acquiesces in reception of proof of the latter. The invalidity of the distinction is demonstrable in the light of the consideration that it is generally not the document the disclosure of which harms the public interest but the facts stated therein.[119]

In regard to secondary oral evidence of documents there is unassailable authority that, if the original document falls within a class of document which is excluded by public policy, a copy is equally excluded.[120] Moreover, if copies of documents are excluded from evidence on the ground of public policy, there is no justification, either in principle or on authority, for the application of a different rule to oral testimony in respect of their contents. The law takes no cognizance of degrees of secondary evidence. Accordingly, once secondary evidence of a document is admissible, a party is entitled to adduce any type of secondary evidence,[121] including oral testimony and circumstantial or presumptive evidence.[122] In conformity with this principle it has been held that, where the original document was excluded on a certificate that its production would be prejudicial to discipline and to the interest of the Inland Revenue, the evidence of clerks in the office who had seen the report was excluded.[123] This attitude finds consistent support in the case law.[124]

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119. J. E. S. Simon, *op. cit.*, p. 69

120. *Ankin* v. *L. N. E. Railway* (1930) 1 K. B. 527; *Duncan* v. *Cammell Laird & Co.* (1942) A. C. 624; *Moss* v. *Chesham U. D. C.* January 16, 1945, before Lynskey, J. See J. E. S. Simon, *op. cit.* p. 68

121. *Brown* v. *Woodman* (1834) 6 C & P. 206, *Doe* v. *Ross* (1840) 7 M. & W. 102; *Hall* v. *Ball* (1841) 3 M. & Gr. 242

122. *R.* v. *Fordingbridge* (1858) 27 L. J. M. C. 290

123. *Hughes* v. *Vargas* (1893) 9 T. L. R. 551

124. *Chatterton* v. *Secretary of State for India* (1895) 2 Q. B. 189 at p. 195; *Moss* v. *Chesham U. D. C.* January 16, 1945, before Lynskey, J.

The condition of the present law is characterized by internal consistency and symmetry, in that formal distinctions – whether between documentary evidence and oral evidence or between types of secondary evidence – do not detract from the applicability of a uniform approach.

(c) In his argument addressed to the House of Lords in *Conway* v. *Rimmer* the Attorney-General made the surprising concession that, even in accordance with the principle enunciated in the *Cammell Laird* case, the courts possessed power to override an objection by the executive (i) taken in bad faith, or (ii) actuated by an irrelevant consideration, or (iii) founded on a false factual premise.[125] As the decided cases suggest,[126] these grounds, considered cumulatively, will result in a significant erosion of the conclusive effect which the certificate by the executive had been declared to possess. The comment has been aptly made that the attractiveness of these heads of review for the courts consists of their virtually untrammelled discretion to pronounce, in relation to any given power of an administrative body, the matters that are and are not to be taken into account and thereby in essence to pass upon the reasonableness of the decision under review.[127] The plenitude of this discretion available to the courts, according to the argument of the Attorney-General, would have whittled down substantially the impregnable position of the executive in matters involving State interest, in terms of the *Cammell Laird* doctrine. However, the usefulness of these formulae as a mode of revivifying the postulate of judicial control is reduced by the practical reversal of the *Cammell Laird* opinion, in so far as it purported to expound the general law relating to the topic, by the unanimous conclusion of the House of Lords in *Conway* v. *Rimmer*.

(d) A drastic method of precluding expansion of the scope of the exclusionary doctrine has been suggested in some decided cases. In *Broome* v. *Broome* Sachs, J. wondered whether the development of Crown privilege on the grounds of public interest "might not now be regarded by the courts in the same light as development of new heads of public policy invalidating contracts, and new heads of criminal charges against individuals of acting to the public mischief; the tendency in each of these matters

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125. (1968) 1 All E. R. 874 at p. 891.

126. See *Franklin* v. *Minister of Town and Country Planning* (1948) A. C. 87; *Smith* v. *East Elloe R. D. C.* (1956) A. C. 736; *Auten* v. *Rayne* (1958) 1 W. L. R. 1300.

127. D. H. Clark, *The Last Word on the Last Word* (1969) 32 Modern Law Review 142 at p. 151; cf. *Roberts* v. *Hopwood* (1925) A. C. 578; *Prescott* v. *Birmingham Corporation* (1955) Ch. 210; *Taylor* v. *Munrow* (1960) 1 W. L. R. 151

being for the courts not to develop fresh heads but to leave them to the legislature."[128] A similar approach to the problem seems to have commended itself to Lord Upjohn in *Conway* v. *Rimmer*.[129]

On this point identical reasoning is not contained in the speeches of the five Law Lords in *Conway* v. *Rimmer*. If the view of Lord Upjohn were to prevail, *Conway* v. *Rimmer* would supersede the *Cammell Laird* doctrine not only to the extent of abrogating the principle of unqualified executive responsibility but in the further sense that, outside the traditional classifications such as national defence, the conduct of foreign policy and "high level inter-departmental communications",[130] other classes of documents would be held intrinsically incapable of exclusion because of the predominant public interest in their adduction as relevant evidence. But the pendulum has not swung so far in the opposite direction. Lords Reid, Hodson and Morris seem by implication to have rejected Lord Upjohn's approach.

The principle suggested by the tenor of the speeches of the majority is that classification of documents *in limine* is not supportable and that an empirical assessment of the competing elements of public policy, against the background of the particular case, cannot be dispensed with. Despite the support which the innovative suggestion by Lord Upjohn has received from writers,[131] it is submitted that the adoption of this proposal will deprive the law of essential malleability and resilience and that the recognition of closed categories impedes unjustifiably the development of new heads of public policy in response to changing requirements and circumstances.

6. Factors Conditioning the Exercise of Judicial Discretion

In the absence of an *a priori* classification which governs absolutely the reception or non-disclosure of evidence, the discretion of the court is the operative criterion. Naturally, the result of the exercise of discretion in peripheral areas cannot be predicted, but a tentative identification of the *indicia* relating to the exercise of judicial discretion in this area may be usefully attempted. The basic criterion is whether suppression of a class of documents is "necessary for the proper functioning of the public service."[132]

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128. (1955) 2 W. L. R. 401 at p. 408.
129. (1968) 1 All E. R. 874 at p. 915.
130. At p. 910.
131. D. H. Clark, *op. cit.*
132. *Duncan* v. *Cammell Laird* & Co. (1942) A. C. 624 at p 642, *per* Lord Simon

(i) It is clear that the public interest requiring the non-disclosure of information which might be useful to those who organize or participate in criminal activities is generally entitled to priority over the counterveiling principle that all evidence relevant to the cause subject to adjudication should be available to the court. Consistently with this attitude, the identity of informers has usually been protected from disclosure.[133] In an action for penalties under the Excise Acts, an English court has refused to allow a witness for the Crown to answer the question whether he gave the information which led to the institution of proceedings.[134] The view has been taken that an Assistant Director of Public Prosecutions cannot be required to produce a letter which he had written to the Director[135] and that a conversation between a private solicitor and the Director of Public Prosecutions is privileged.[136] The stability of this principle has received emphasis: "This rule of public policy is not a matter of discretion; it is a rule of law and, as such, should be applied by the judge at the trial."[137] Although in a case of murder tried in the middle of the last century, Cockburn, C. J. allowed a police officer to disclose the names of the persons who had given him the information which led to the discovery of a phial containing poison,[138] this attitude is at variance with a paramount objective of public policy: "If the police were bound to answer that sort of question, the ultimate and undoubted effect would be to discourage informants and to make the protection of the public very much more difficult than it is."[139]

This principle has been extended, with manifest justification, to ensure the protection of persons who supply valuable information to a Gaming Board. In *Rogers* v. *Secretary of State for the Home Department*[140] a company of which Rogers was a director sought the Gaming Board's consent to the grant of licences in respect of bingo halls to be managed by Rogers. The Board was obliged to take into account Rogers' character. They made inquiries of the Sussex Police, and in reply the Assistant Chief Constable of Sussex wrote a letter to the Board, which later refused the consent sought. Rogers began proceedings for criminal libel regarding the contents of the letter. The Home Secretary claimed

133. *R.* v. *Hardy* (1794) 24 St. Tr. 199 at p. 208, *per* Eyre, C. J.
134. *Attorney-General* v. *Briant* (1846) 15 M. & W. 169
135. *R.* v. *Benson* (1900) 151 C. C. C. Sess. Pap. 705.
136. *R.* v. *Carpenter* (1911) 156 C. C. C. Sess. Pap. 298
137. *Marks* v. *Beyfus* (1890) 25 Q. B. D. 494 at p. 498, *per* Lord Esher, M. R.
138. *R.* v. *Richardson* (1863) 3 F. & F. 692.
139. Lord MacDermott, *Protection from Power under English Law*, Hamlyn Lectures for 1957, pp. 103 – 104
140. (1973) A. C. 388.

privilege in respect of the letter and a copy. The House of Lords upheld the claims. Lord Reid placed emphasis on the consideration that the Board required the fullest information it could obtain in order to identify and exclude persons of dubious character and reputation from the privilege of obtaining a licence to conduct a gaming establishment and that many would refuse to speak unless assured of absolute secrecy.

(ii) It probably makes a difference whether the party who claims to be prejudiced by non-disclosure incurs the risk, in the proceedings in question, of forfeiting a right at that time vested in him, or whether the proceedings have as their object the conferment on him of a privilege which he did not enjoy previously. Thus, in *Rogers* v. *Secretary of State for the Home Department*, the House of Lords took into account that the documents which were eventually excluded came into existence only because the applicant was asking for a privilege and was submitting his character and reputation to scrutiny, and that the documents were not used to deprive him of any legal right.

(iii) The culpability or lack of blameworthiness of the party who is adversely affected by exclusion of the evidence is a material consideration.

In *Norwich Pharmacal Co.* v. *Customs and Excise Commissioners*[141] the appellants were owners and licencees of a patent for a chemical called furazolidone. The patent was being infringed by illegal imports of the substance. The appellants instituted proceedings against the Commissioners to obtain the names and addresses of the importers. The Commissioners made a claim for privilege in an affidavit. This claim was rejected by the House of Lords. The primary ground on which the Chairman of the Commissioners sought to resist disclosure was that the good relations and mutual confidence which usually existed between the officers of the Customs and traders would be seriously impaired if it became known that any information of a confidential nature obtained from traders under statutory powers might have to be disclosed by the Commissioners otherwise than under the provisions of a statute enabling them to disclose it. One of the reasons emerging from the speeches in the House of Lords for the rejection of the claim by the Commissioners was that apprehension of this kind would be entertained only by dishonest traders[142].

This case may be contrasted with *Alfred Crompton Amusements Machines Ltd.* v. *Customs and Excise Commissioners*[143]. An issue arose between the company and the Commissioners as to the correct assessment for purchase

141. (1973) 2 All. E. R. 943.
142. See, in particular, *per* Lord Cross of Chelsea
143. (1973) 2 All E. R. 1169

tax on certain machines made by the company. The Commissioners claimed privilege for certain documents containing information supplied by third parties. The House of Lords upheld the claim. Distinguishing the *Norwich Pharmacal* case, Lord Cross of Chelsea remarked: "There it was probable that all the importers whose names were disclosed were wrongdoers and the disclosure of the names of any, if there were any, who were innocent would not be likely to do them any harm at all. Here, on the other hand, one can well see that the third parties who have supplied this information to the Commissioners because of the existence of their statutory powers would very much resent its disclosure by the Commissioners to the appellants."[144].

(iv) The degree of likelihood or improbability of the harm which is envisaged as a consequence of reception of the evidence is a relevant factor. In the *Norwich Pharmacal* case one of the objections to disclosure was that traders who did not wish to have their names disclosed might be tempted to concoct false documents and thereby hamper the work of the Customs. Lord Reid pointed out that this required at least a conspiracy between the foreign consignor and the importer, and that such a contingency was in the highest degree improbable.

(v) The circumstance that an objection in a case is not primarily to prevent production but to sanction abstraction of documents which had already been lodged by one of the parties in proceedings before the court diminishes the merit of the objection. In *Whitehall* v. *Whitehall*[145] the letter which the Minister sought to suppress had already been produced in process. The claim by the executive was disallowed.

(vi) The purpose for which disclosure of the document or reception of the oral testimony is objected to, is pertinent to exercise of the court's discretion. In *Conway* v. *Rimmer* Lord Reid said: "Even where the full contents of a report have already been made public in a criminal case, Crown privilege is still claimed for that report in a civil case··· not to protect the document – its contents are already public property—but to protect the writer from civil liability, should he be sued for libel or other tort"[146]. Lord Reid, while expressing disapproval of this principle, did not assail its validity. It is submitted, however, that an ulterior purpose not relevant to furtherance of the public interest in question should militate decisively against acceptance of the claim by the executive.

144· At p. 1185

145· 1957 S. C. 30 especially at p. 39, *per* Lord Clyde.

146· (1968) 1 All E. R. 874 at p. 882

(vii) It has been asserted that "Government servants are reluctant to put their observations into writing if they are likely to be produced in a court of law"[147]. But the argument based on candour lacks cogency. Lord Hodson has trenchantly commented that "It is strange that civil servants alone are supposed to be unable to be candid in their statements made in the course of duty without the protection of an absolute privilege denied to their other fellow subjects."[148]. Lord Pearce has gone so far as to suggest that a police officer, for instance, far from being deterred from candour by the thought that a judge might read his notes, "would rather be put on his mettle to make sure that his observations were sound and accurate, and be stimulated by the thought that he might prove to be the one impartial recorder on whom justice between the parties might ultimately turn"[149]. The desirability of frankness in official communications is a relevant, but not decisive, consideration which has to be assessed in relation to other factors.

(viii) Although confidentiality is neither a ground of privilege nor a justification for withholding evidence in the public interest, it may have an important bearing on the latter issue[150]. The range of factors by reference to which the competing elements of public policy have to be evaluated, will generally include the confidentiality of documents or other evidence.

(ix) Lord Cross of Chelsea has suggested: "In a case where the contentions for and against disclosure appear to be fairly evenly balanced, the court should uphold a claim for privilege on the ground of public interest and trust to the head of the department concerned to do whatever he can to mitigate the ill effects of nondisclosure"[151]. The validity of this approach is controversial. The opposite view that, in cases of doubt, the public interest in the due administration of justice should prevail, may be urged with equal force.

7. Special Considerations Applicable to Criminal Proceedings

The principle has been recognized generally that the interest of the State in the exclusion of documents or other evidence of a confidential or sensitive nature must give way to the overriding need to provide a defendant

147. Sir Thomas Inskip, *Proceedings by and against the Crown*, (1930) 4 Cambridge Law Journal 1 at p. 10

148. *Conway* v. *Rimmer* (1968) A. C. 910 at p. 967

149. *Conway* v. *Rimmer* (1968) A. C. 910 at p. 985

150. R. Cross, *Evidence* (4th edition, 1974), p. 273

151. *Alfred Crompton Amusement Machines, Ltd.* v. *Customs and Excise Commissioners* (1973) 2 All E. R. 1169 at p. 1185.

in criminal proceedings with every opportunity of vindicating his innocence[152]. Viscount Kilmuir, L. C., in his statement to the House of Lords on the scope of Crown privilege, said: "If medical documents, or indeed other documents, are relevant to the defence in criminal proceedings, Crown privilege should not be claimed"[153].

In at least one reported case[154] disclosure of the name of an informant has been ordered. But the principle is not entirely free from doubt in view of a *cursus curiae* which has resisted the divulging of information advantageous to the defence[155]. For Canadian law the view has been taken that, where evidence contained in a tax return is pertinent as evidence on a criminal charge, the Magistrate before whom the charge is tried, is a person legally entitled to the information[156].

The priority accorded to the interest of the defendant in criminal proceedings finds expression in the rule that, if the evidence of a Crown witness is contradictory of a statement made by him, the prosecution should make the statement available to counsel for the defence as a basis for cross-examination.[157]

In the United States of America the special protection conferred on a person accused of crime has been made to rest on a theory of implied waiver. The American courts have held that, if the Government is instituting criminal proceedings, the accused is entitled to production of the Government files and documents.[158] It is considered repugnant to rudimentary concepts of equity and fair dealing that the accused should be denied access to material which the Government has used in preparing its case.[159] Learned Hand, J., has observed: "While we must accept it is lawful for a department of the Government to suppress documents, even when they will help determine controversies between third persons, we cannot agree that this should include their suppression in a criminal proceeding founded upon those very dealings to which the documents relate and whose criminality they will, or may, tend to exculpate."[160]

152· cf. *Rogers* v. *Secretary of State for the Home Department* (1973) A. C. 388 at p. 407, *per* Lord Simon of Glaisdale

153· Statement in the House of Lords on 6 June 1956.

154· R. v. *Richardson* (1863) 3 F. & F. 693; cf *Webb* v. *Catchlove* (1886) 3 T. L. R. 159

155· R. v. *Watson* (1817) 32 St. Tr. 1; R. v. *Cobbett* (1831) 2 St. Tr. (N. S.) 789; R. v. O'Connor (1846) 4 St. Tr. (N. S.) 935; *Attorney-General* v. *Briant* (1846) 15 L. J. Ex. 265.

156· *Ship* v. R. (1945) 95 Can. C. C. 143

157· R. v. *Clarke* (1930) 22 Cr. App. Rep. 58; R. v. *Hall* (1958) 43 Cr. App. Rep. 29; cf. *Dallison* v. *Caffery* (1965) 1 Q. B. 348

158· *U. S.* v. *Krulewitch* (1944) 145 F. 2nd 76.

159· *U. S.* v. *Beekman* (1946) 155 F. 2nd 580 at p. 584

160· *U. S.* v. *Andolschek* (1944) 142 F. 2nd 503

In terms of a strictly conceptual analysis the dichotomy between the application of the exclusionary rule in civil and in criminal proceedings has been considered awkward.[161] Lord Reid has commented on the supposed illogicality of the prevailing law: "We have the curious result that 'freedom and candour of communication' is supposed not to be inhibited by knowledge of the writer that his report may be disclosed in a criminal case, but would still be supposed to be inhibited if he thought that his report might be disclosed in a civil case."[162]

It is submitted, however, that the dichotomy is supportable from the standpoint of policy. "Freedom and candour of communication" is a relevant element of the public interest which may be worthy of protection in competition with such other aspects of the public interest as are of comparable importance, but it must yield to paramount considerations of public policy to which the object of candour in official communications can appropriately be regarded as subordinate. This heightens the significance of a relative assessment, *ad hoc*, of the competing interests involved in a particular case.

8. Procedural Aspects

Objection to disclosure may be taken on oath either orally or by affidavit.[163]

The procedure in cases where documentary evidence is objected to, is quite settled. The affidavit in support of the claim for exclusion should set out with sufficient particularity the nature and identity of the documents which it is desired to withhold, and the grounds on which a claim to do so is based.[164] Where the claim for privilege is not made in the proper manner, the judge is entitled to exercise his own discretion.[165]

A more complex procedure may be required when oral evidence is sought to be excluded on the ground that its reception is injurious to State interest. Sachs, J., confronted with this difficulty in *Broome* v. *Broome*,[166] said: "Any certificate in a 'blanket form' which stopped a witness going into the witness box seems contrary in principle to those portions of the decided cases which enjoin Ministers, before giving a certificate as regards

161. A. L. Goodhart, *The Authority of Duncan* v. *Cammell Laird & Co.* (1963) 79 Law Quarterly Review 153 at p. 159.
162. *Conway* v. *Rimmer, supra.*
163. *Re Hargreaves* (1900) 1 Ch. 347
164. *Alfred Crompton Amusement Machines, Ltd.* v. *Customs and Excise Commissioners, supra.*
165. *Spigelman* v. *Hocken* (1933) 150 L. T. 256
166. *Supra*

documents, to examine each in turn in the light of the issues arising in the case." The force of this argument is obvious. The inevitable result of conceding the claim asserted by the Crown in *Broome*'s case would be to give the Crown power to prevent certain classes of witnesses, for example, civil servants, from having to give evidence in court.[167]

At the same time it cannot be denied that oral testimony may be no less detrimental to State interest than documentary evidence in some contexts. What is called for, then, is a procedure which, although capable of application to oral evidence, furnishes the court with adequate opportunity to disallow arbitrary or capricious claims by the executive.

The outline of a procedure consistent with these objectives emerges inferentially from the judgment in *Broome* v. *Broome*. In the first place, it is essential that the Minister's affidavit should delineate the precise scope of the evidence to which objection is taken. Moreover, the court would derive assistance from a statement by the Minister as to the way in which the offensive evidence injures the public interest. Secondly, emphasis has been placed on the need to secure the attendance in court of counsel on behalf of the Minister to listen to the questions and to object to them, if necessary. By these means the court should be able to ensure that the ambit of the exclusionary rule is restricted as narrowly as is consistent with protection of the State interest.

167· J. E. S. Simon, *op. cit*,. pp. 71 – 72

A Study of the Practice of Well Irrigation in the Country around Vavuniya in Northern Sri Lanka

C. M. MADDUMA BANDARA

Introduction

Vavuniya[1] is located in the North Central Dry Zone of Sri Lanka, where the two major ethnic groups of the Island the *Sinhalese* and the *Tamils* meet geographically (Fig. 1). Historically, this area formed part of the ancient province of Nuwarakalawiya[2] where a hydraulic civilization once flourished (Brohier – 1934; Leach – 1959). The traditional system of agriculture based on village irrigation reservoirs combined with *chena cultivation* constituted the mainstay of life for both *Rajarata Sinhalese* and the *Vanniar Tamil* peasantry. Over the centuries of land occupance, a three-fold landuse pattern comprised of the *wewa* (the irrigation reservoir) the *wela* (the rice field) and the *gangoda* (homestead garden) was evolved. In the forest tract surrounding the nucleated village settlement, *chena cultivation* (or shifting cultivation) is practised during the wet season. This landuse system was found to be spatially well organized (Tennakoon, 1974, see Fig. 2) and the sequence of agricultural activities over the year was observed to be finely harmonized (Panabokke, 1959). The low population density, kinship and social cohesion in the villages combined with Buddhist or Hindu culture symbolised by the religious monuments often found on the inselbergs of the Dry Zone landscape, provided an ecologically and socially stable human organization (Leach, 1961). Inspite of the arrival of peasant colonization schemes (Farmer, 1957) such as Ullukkulama and Iratperiyakulama, and the increase of rural population during recent times, the basic structure of the *purana* (traditional) village system in the Vavuniya country appears to have remained more or less intact. However, the increase in population without a commensurate rise of real incomes,

1. The data presented in this paper relate to the Vavuniya South Sinhalese and Tamil Revenue Division of the District.

2. Nuwarakalawiya according to the folklore is that part of the Island where the three giant irrigation reservoirs of *Nuwara* Wewa *Kala* Wewa and *Padaviya* are situated. An irrigation civilization flourished in this area during the period 5th Century BC to about 10th Century AD.

found expression in widespread poverty and youth unemployment which contributed in no small way to the social unrest and upheavals in the early part of this decade. It had thus become imperative to explore avenues of employment for the increasing unemployed youth and to increase the general levels of income in these rural areas through an increase in the productivity of lands both used and unused. The open-well ground water irrigation which began to spread during the last two decades, inspite of the lack of any effective and adequate governmental support, appears to have served at least in a small way to ameliorate the life in the villages where it is actually practised.

Nature of the Present Survey

In view of the numerous attempts made to study the environmental aspects of ground water use in the recent past (Farmer, 1956, Madduma Bandara, 1973 and 1977, Fernando, 1973, British ODM Team, 1976), the present survey was undertaken with a different intention which was geared towards achieving three broad objectives, namely: (a) to monitor the developments taking place in the agricultural practices based on well irrigation in the area; (b) to understand the farmers' attitudes and perceptions regarding the practice of well irrigation, and finally (c) to explore and plan for the paths along which possible future developments should take place. The present paper reports and analyses some results of the survey relating to the first two objectives.

During the field survey particular attention was paid to ascertain the nature of a few important issues. These included:

(i) the degree of risk involved in the excavation of wells in the hard rock areas (ii) the capability of the well irrigation practice for employment generation and (iii) farmers' perceptions on well irrigation as an economically feasible venture. Since the answers to most of these questions cannot be mutually exclusive, no attempt has been made to deal with them separately.

The field survey was conducted during the middle of the dry season (i.e. June to August) of 1977. A total of 361 farmers was interviewed with the aid of a predesigned and pilot-tested questionnaire and their responses were recorded in the field. In the absence of any comprehensive understanding of the total population of farmers practising well irrigation, extraction of a representative random sample proved rather abortive. Therefore, the present sample of 361 farmers was selected partly with the aid of records kept at government offices and partly from the information

gathered while trekking from village to village.[3] However, this shortcoming in the survey is recognized as statistically serious. One Sinhalese village (i.e. Kokveliya, located about 5 km. to the north of Vavuniya town) where there were some 42 food production wells[4] was excluded from the sample in view of the fact that it was selected as a model village for development by the Freedom from Hunger Campaign Project of which this survey formed an integral part.

The interviews were conducted by two Tamil speaking and two Sinhalese speaking investigators all of whom were graduates who read either Geography or Economics or both at the University. Much of the technical information pertaining to the wells (such as geological, hydrological and constructional details) were obtained directly by the investigators who had some training in handling the simple field equipment involved. The work of investigators was subjected to constant checking and supervision in the field.

The Environmental Setting

The country around Vavuniya falls within the area generally referred to as the 'Dry Zone' which covers nearly 2/3 of the total land area of the Republic of Sri Lanka (see Fig. 1). The use of the term "Dry Zone" to describe an area which receives a mean annual rainfall exceeding 1250 mm was not without controversy. Nevertheless, for a variety of reasons, the use of the term "Dry Zone" had come to stay in the geographical literature on Sri Lanka. The fact that the "Dry Zone" is a reality cannot be gainsaid in view of the marked seasonality of rainfall and the conditions of water availability (Sirinanda, 1975). Thus Vavuniya which forms part of the northern segment of the Dry Zone of Sri Lanka receives nearly 70% of its total annual rainfall of some 1400mm. during a short rainy season extending from October to January, leaving the greater part of the year dry except in April when a small but agriculturally significant amount of rain is received from convectional thunderstorms. Apart from the high seasonality of rainfall, the intense solar radiation combined with strong dry winds

3. According to some officical claims there were 3000 food production wells in the Vavuniya District in 1976. If these figures are dependable, the present sample represents approximately 15% of the total number of farmers practising well irrigation It should be noted that farmers practising well irrigation form only a small minority of the total number of farmers in the area. The great majority of farmers in Vavuniya, particularly the Sinhalese farmers still depend entirely on the traditional agriculture based on village irrigation tanks and *chena* cultivation.

4. The term food production well was used by the government functionaries to describe those wells which were constructed through governmental support for the purpose of irrigating food crops.

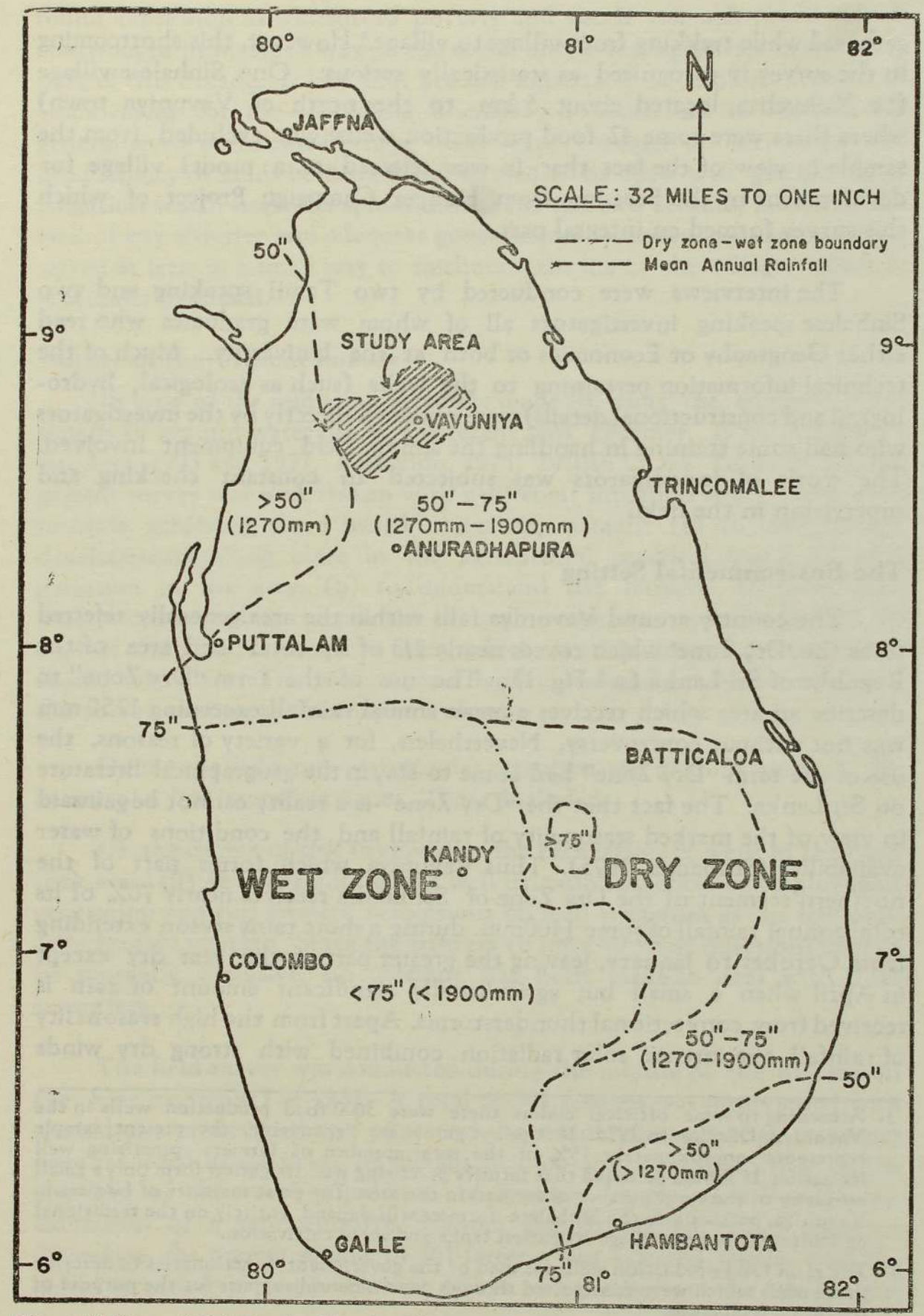


Figure 1: Map of Sri Lanka Showing the Location of the Study Area.

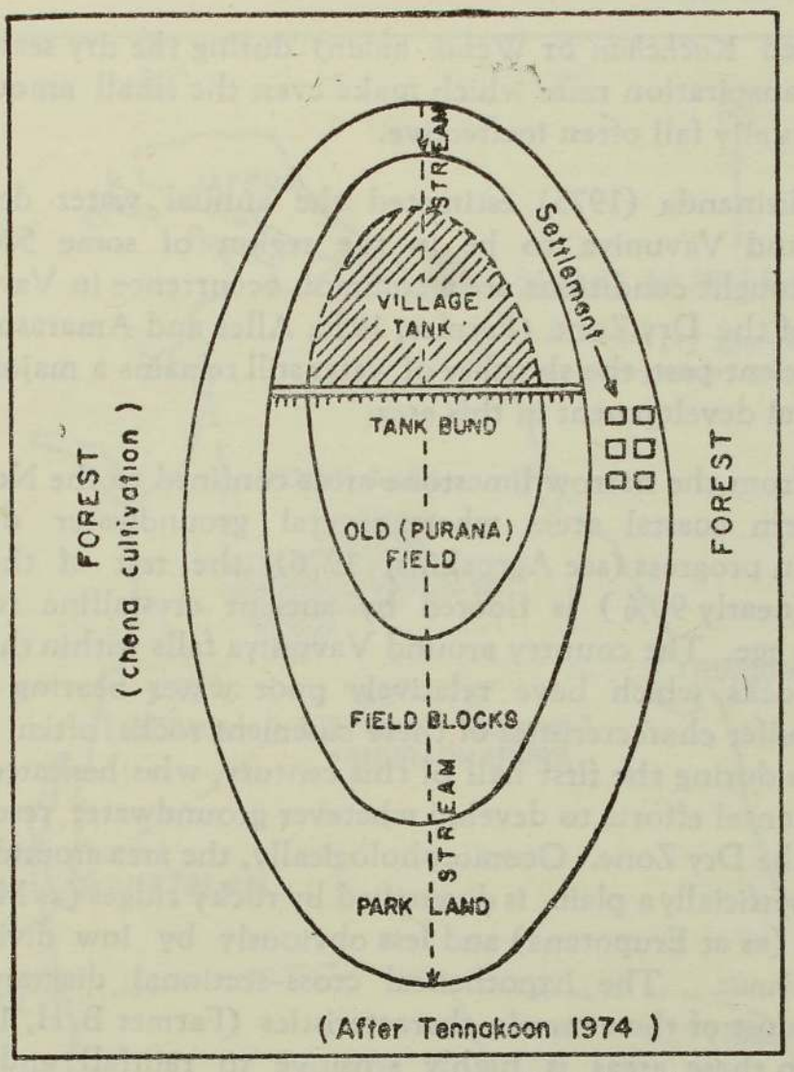
(locally named *Kachchan* or *Wesak hulan*) during the dry season leads to high evapotranspiration rates which make even the small amount of rain that does actually fall often ineffective.

Thus Sirinanda (1975) estimated the annual water deficit in the country around Vavuniya to be in the region of some 500 mm. The prolonged drought conditions are a common occurrence in Vavuniya as in other parts of the Dry Zone (Farmer, 1956; Alles and Amarasoma, 1968). As in the ancient past, the shortage of water still remains a major constraint to agricultural development in this area.

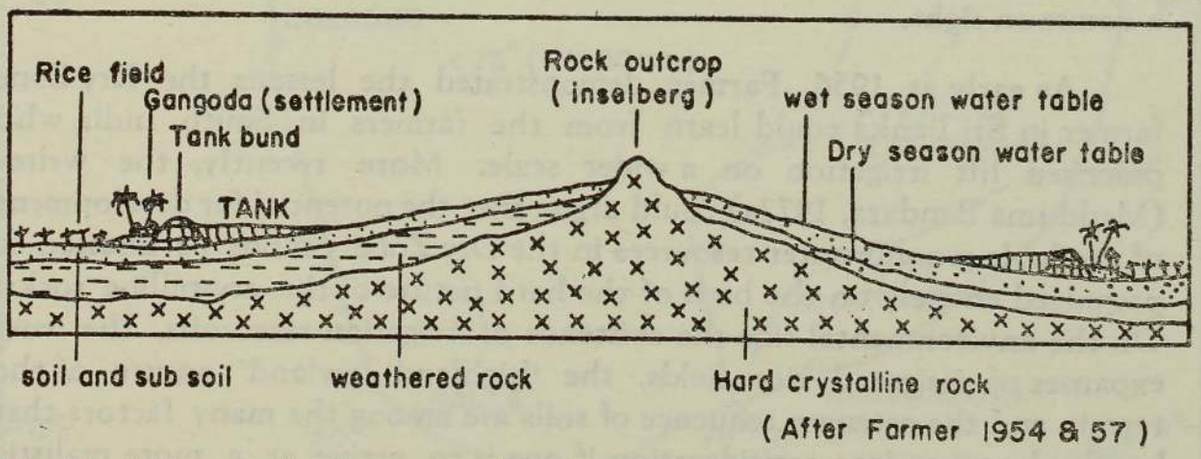
Apart from the narrow limestone areas confined to the Northern and North Western coastal areas where several groundwater development projects are in progress (see Agroskills, 1976), the rest of the Island of Sri Lanka (nearly 90%) is floored by ancient crystalline rocks of the Precambrian age. The country around Vavuniya falls within this group of crystalline rocks which have relatively poor water bearing properties. The poor aquifer characteristics of these basement rocks often put off the civil servants during the first half of this century, who hesitated to direct any governmental efforts to develop whatever groundwater resources were available in the Dry Zone. Geomorphologically, the area around Vavuniya, although superficially a plain, is diversified by rocky ridges (as Madukanda) isolated hills (as at Erupotana) and less obviously by low divides locally named as *hinnas*. The hypothetical cross-sectional diagram in Fig. 3 summarises most of these terrain characteristics (Farmer B. H, 1954). The water table in these areas is highly sensitive to rainfall and fluctuates seasonally (Madduma Bandara, 1977b).

The vegetation in the area around Vavuniya is basically a deciduous dry zone tropical forest type. Although much of the natural vegetation is now modified by agricultural activities, large tracts of forest lands are still a common sight.

As early as 1956, Farmer demonstrated the lessons the Dry Zone farmer in Sri Lanka could learn from the farmers in South India who practised lift irrigation on a wider scale. More recently, the writer (Madduma Bandara, 1977a) could argue that the potential for development of available ground water resources in the Dry Zone cannot be assessed or prejudged entirely on the basis of the hard nature of the crystalline rocks. On the environmental side the existence of irrigation reservoirs, the vast expanses of irrigated rice fields, the 'highland-lowland' nature of the terrain and the catenary sequence of soils are among the many factors that have to be taken into consideration if one is to arrive at a more realistic



Fig· 2: An Idealized Representation of Spatial Organization of Agriculture in a Purana (Traditional) Village.
(Irrigation wells are mostly located in the Parkland zone)



Fig· 3: A Diagramatic Cross-Section of the Dry Zone Catena.

estimate of the potential for development of ground water resources. It is equally important to recognize the importance of recent developments such as the upward trend in the market prices of agricultural commodities such as *chillies* and *onions* which can affect the cost-benefit ratios in a significant way. Apart from the environmental and economic issues, the attitudes and perceptions of the farmers who are in fact the final decision-makers should also be given due consideration. It had been argued that any assessment which fell short of recognizing this whole gamut of factors is bound to be superficial and unrealistic.

Wells: their history, location, physical and constructional characteristics

The practice of using wells for irrigation of subsidiary food crops existed among Tamil farmers in Vavuniya even before the time of national Independence in 1948. Thus it was found that nearly 5% of the wells in the sample were excavated before 1948. However, as Fig 4 indicates the excavation of wells on a much wider scale commenced only after 1956. There was a peak of well digging activities in the 1957/58 period during which some 14% of the wells in the sample were opened.[5] However, the largest number of wells in the sample were opened only after 1974. Some 23% of the wells in the sample were excavated between the beginning of 1974 and the time of the survey in mid 1977. It was also during this period that the practice of well irrigation began to spread into Sinhalese and Muslim villages.

Several factors were responsible for the rapid spread of well irrigation in the three year period from 1974 - 1977. Firstly, the unusual drought which prevailed during the early seventies compelled many farmers to explore the possibilities of groundwater irrigation. It was also during this time, that the prices of some agricultural food commodities such as *chillies* and *onions* began to soar up to unprecedented levels. The price of *chillies* for example shot up from around Rs. 5/- per pound to something like Rs. 35/- per pound within a period as short as three to four months. The government which often had to spend a substantial amount of money on drought relief, also became more receptive to the idea of groundwater

5. It is difficult to isolate the reasons for the escalation of well digging activities during this particular period. The large number of droughts and dry spells which occured in 1956 (199 days) and 1957 (201 days) have obviously compelled the farmers to dig more wells. Apart from this, the fears created in the minds of Tamil farmers at the dawn of Bandaranaike era in the political history of the Island would have been manifested in the unprecedented rate of well digging activities aimed at consolidating their land holdings.

6. Political Authority represented the apex of district administration at that time,

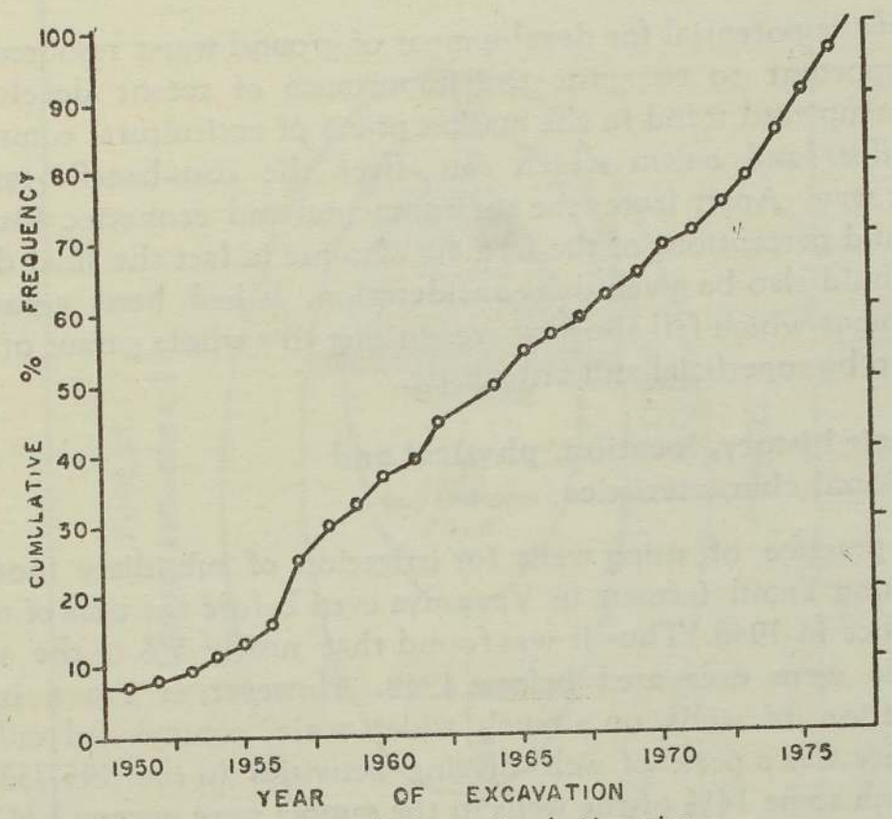


Fig 4 The History of Well Excavation in Vavuniya.

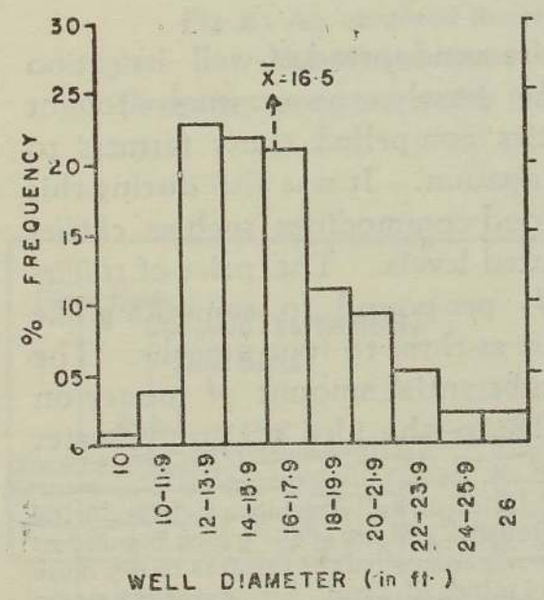


Fig 5 Distribution of Well Diameters.

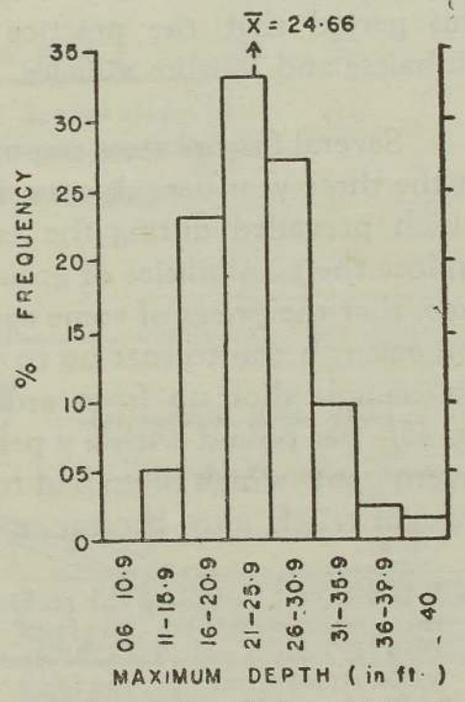


Fig 6 Distribution of the Maximum Depth of Wells.

irrigation and began to provide assistance in a small way to farmers through Political Authorities[6] to open up what was then called 'food production wells'. The food crisis in the country brought enough pressure on the Government to assist the farmers to open wells to irrigate at least a few food crops even on a very small scale. The decentralized budgetting which was introduced in the early seventies made it possible for each district to handle its own development programmes, although the response to the 'food production drive' was different in different Dry Zone districts. In this connection, the Government Agent of Vavuniya at that time deserves special credit for his relentless efforts to develop well irrigation.[7] Apart from these attempts, the initiative of some rich farmers in Vavuniya[8] in the field of well irrigation undoubtedly had a demonstrative effect on other farmers in the area. Well irrigation being basically a Tamilian technology, it was the Tamil farmer who assumed the role of the innovator and the spread of wells generally appears to approximate the rising segment of the usual 's' curve of innovation diffusion, indicating that well irrigation was still spreading fast at the time of the survey. (See Fig. 4).

Location of the Wells

Nearly 96% of the wells belonging to the farmers in the survey sample were located in what is considered as 'highland' in the villages. Although the term 'highland' in general refers to the land that cannot be irrigated by the village irrigation tank, it often includes several landuse categories. It may include the homestead garden of the farmer, a plot of land given to the farmer under the village expansion scheme where the farmer is still not resident, or the *chena* land where the farmer has put up a temporary shed with the intention of making it his permanent abode in the future. Of these categories, the commonest type of land where the wells were found was the land given to the farmers under Land Development Ordinance as part of village expansion programmes or similar arrangements. These are often square or rectangular blocks of land separated by straight pathways drawn on Block Out Plans with little relevance to soil or groundwater conditions. Thus as at Samalankulam, many homestead gardens have bare rock exposures, or extremely thin soil horizons.

The remaining 4% of wells in the sample were located in *paddy* lands owned mostly by rich farmers who bought them from poorer ones in the *Purana* villages. However, most of such lands are not *purana* fields but

7. The Government Agent of Vavuniya at that time was nick-named' the great well digger' by many government officers.

8. An example is one such farmer who claimed that he owns some 35 irrigation wells, and who happened to be the owner of several agro-business establishments in Vavuniya.

those located at the periphery of the village *paddy* tracts. It was observed (as along the Vavuniya – Mamaduwa Road) that three crops were raised annually, one after another, in these well irrigated paddy lands. Apart from these low lands, highland is also used to grow rice mostly by Tamil farmers during the wet season in rotation with other crops such as ground-nuts and chillies.

According to the survey nearly 90% of the irrigation wells were located at a distance of less than a kilometre from the village irrigation *tanks* and of them, more than 50% were located within a distance of ½km. from the *tanks*. This indicates that most irrigation wells directly benefit from a water table artificially maintained by the irrigation *tanks*. Many farmers in the sample were aware of this phenomenon and during the discussions mentioned that the water level in the wells actually fluctuated with the water level of the *tanks*.

Some 5% of the wells in the sample were observed to be located in close proximity to the exposed rock outcrops. Although most farmers who had such wells were aware of the fact that digging wells close to exposed granite outcrops is a gamble, they had hardly any choice than to dig their wells within their property boundaries. Regarding the selection of specific sites where the wells were dug, different farmers adopted different methods. The great majority of them selected their well sites on astrological advice. Water diviners were also employed in some cases for a higher fee than what is paid for an astrologer. There was also a small group of farmers who made their own independent decisions based on the observation of the location of termite hills and certain types of plants and forest trees. The scientific validity of all these methods, although highly questionable still remains to be determined.

Physical and constructional characteristics of wells

For the sample survey only those wells which were used for the irrigation of crops were chosen and by doing so, wells used only for domestic water supply were systematically excluded from the sample. The size of the wells included in the sample, as indicated by the top diameter varied between 2 and 9 metres. However, as Fig. 5 shows the largest proportion of wells had diameters ranging between 4 and 6 metres (12–18 ft.) and this comprised nearly 66% of the sample. On the other hand, the maximum depth of the wells varied between 3 and 15 metres (see Fig. 6). Here again the great majority of wells (64%) had depths between 5 and 9 metres (15–30 ft.) In many wells the bottom diameter

was slightly smaller than the top diameter which represented a method adopted by the farmers to make the walls of the wells more stable especially during the rainy season.

In some 51% of the wells in the sample crystalline bedrock (granitic or gneissic) was encountered while digging. The remaining 49% was reported to be dug into the weathered or 'brittle' rocks. Of the wells reported as located on the weathered rocks, large rock fragments or rounded boulders were seen in 23%. The depth at which the bedrock was encountered varied from 2 to 10 metres. Table 1 shows the percentage of wells encountering the bedrock at given depths. This shows that in many wells the bedrock was encountered at depths between 3·5 and 7·0 metres. This indicated that in the 'highland' areas where 96% of the survey wells were located, nearly 50% of the wells will hit the bedrock at depths of less than 10 metres.

TABLE 1

Depth of bedrock from surface		Percentage of wells
m	ft	
2·4	08	00·05
3·0	10	03·00
3·6	12	10·80
4·3	14	19·10
4·9	16	26·00
5·5	18	32·10
6·1	20	37·90
6·7	22	44·30
7·3	24	46·60
7·9	26	48 40
8·5	28	49·50
9·1	30	49·80
15·2	50	50·40

Among other things, Table 1 shows that one can be highly confident that the bedrock will not be encountered in the highlands until a depth of 3 metres from the surface is reached. However, the probability of encountering the bedrock increases rapidly within the next 3 meters. At a depth of 8 metres from the surface, the chances of hitting the bedrock becomes fifty-percent.

In general, the field observations indicate that bedrock-bottomed wells are located closer to the divides than to the lowlands. An average vertical section of a well wall shows a soil profile (A and B) up to a maximum depth of 2 metres and then a gravel layer at a depth of 2 – 3 metres. Below this a weathered rock layer is seen between 3 and 5 metres which often contains large rock fragments and rounded boulders. The weathered layer extends up to the crystalline bedrock the depth of which varies according to the thickness of the regolith above it.

It appears from the above discussion that only half the wells in the sample had rock bottoms and the maximum depth of the wells varied between 3–15 meters. On the basis of these two facts, one can argue that bedrock was not encountered in many wells because they were very shallow. However, a comparison of the depths of bedrock wells with the depths of those dug into the weathered rocks does not support such a view.

In the excavation of wells, encountering the bedrock at shallow depths has serious hydrological and economic implications. According to the survey some 69 wells (19% of the sample) were reported as 'running dry' during the height of the dry season. About 60% of these seasonal wells were dug into the hard bedrock. Any attempt to deepen these wells by blasting the rock is not only costly but can also often prove to be a futile exercise. Nevertheless, the wells that run dry during the dry season cannot be written off as total failures. Nearly 40% of these seasonal wells were in the weathered rocks and they could be deepened without much cost to obtain more water. Apart from this, out of these 69 wells, only in 6, was the adoption of some method of augmenting the supplies observed. This suggests that there is much scope for improving the water supplies of these seasonal wells. However, even if their supplies are augmented by various methods, it is difficult to expect many wells to have enough water to make any cultivation possible during the height of the dry season. On the other hand, if they can provide enough water for animals and domestic use when other sources of water become scarce, in addition to their role as supplemental wells during the wet season when any failure of rains can destroy a crop, they can prove to be economically productive and highly beneficial to the rural communities.

The farmers who made some attempts to augment the supplies of their rock-bottomed wells were observed to have adopted several methods. These devices included the drilling of bore holes at the bottom of the well, digging a small well at the bottom of the main well and the excavation of horizontal extension galleries. Nearly 20% of the farmers in the sample mentioned the adoption of one or more of these supply augmentation techniques. The most popular method of them all was the drilling of bottom bore holes. Usually, the drilling was done manually by skilled labour gangs who moved from village to village with their locally fabricated equipment. Being a hard and a skilled job the charges of the workmen were 3–4 times higher than the daily wage paid for other agricultural labourers. Most farmers who used the bore hole method reported that it did significantly increase the volume of water in their wells. However,

apart from the cost, the drill gangs were few and difficult to trace when there was a real need. This appears to be an area where the concepts of intermediate technology could be successfully applied.

When the farmers were asked about the rate of recovery of their wells when they are occasionally emptied for purposes of cleaning, nearly 75% of them reported that the normal water level is regained within 3 days. Some 47% of them reported that it occurs within 24 hours.

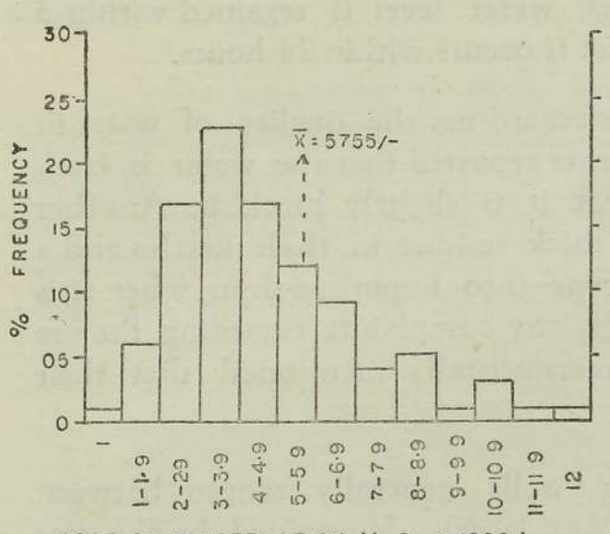
There were not many complaints regarding the quality of water in the wells. Some 71% of the respondents reported that the water is fresh and good while only 14% reported that it is slightly brackish. Another 14% reported that the water leaves a thick residue in their kettles and a few (1%) people reported that rice turns into a pink colour when it is boiled in well water. There were hardly any complaints regarding the use of well water for irrigation. Some farmers actually mentioned that their crops thrive better on well water.

The total cost of constructing wells generally ranged between Rs. 1000 and Rs. 12,000. The cost was largely determined by the size and depth of the well as on the depth of rock blasting where it became necessary. The sample also included some 9% of the farmers whose wells remained unlined up to the time of the survey. The cost also varied according to the year of construction, the depth of concrete casing, the amount of family labour input and a host of other minor factors. Although the cost of constructing the wells varied widely, nearly 75% of the wells were constructed at a cost of less than Rs. 6000 and some 51% of the wells came within the cost bracket of Rs. 2000 – 5000 (Fig. 7).

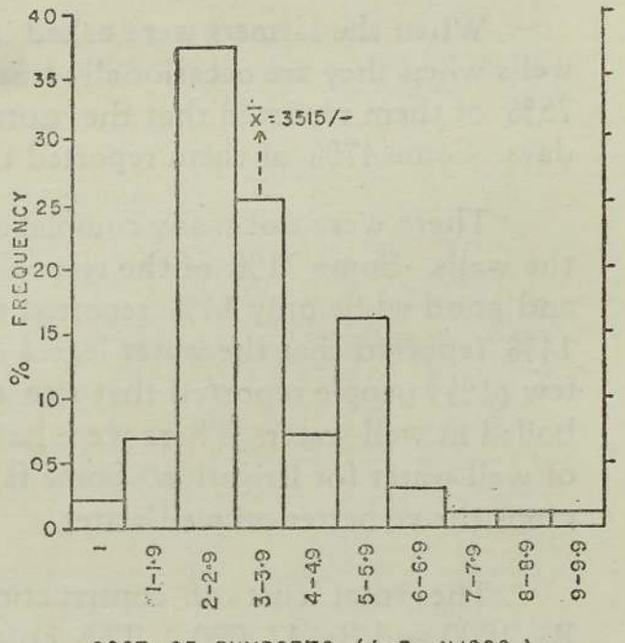
There were two sources of funds for excavating and constructing wells. About 48% of the farmers reported that they received governmental support, while a similar proportion (46%) reported that they used their private savings. There was a smaller category of farmers (5%) who mentioned that they used only family labour for excavation. It was surprising that only one farmer reported that he obtained a private loan to construct the well.

Water Pumps and other Water Lifting Mechanisms

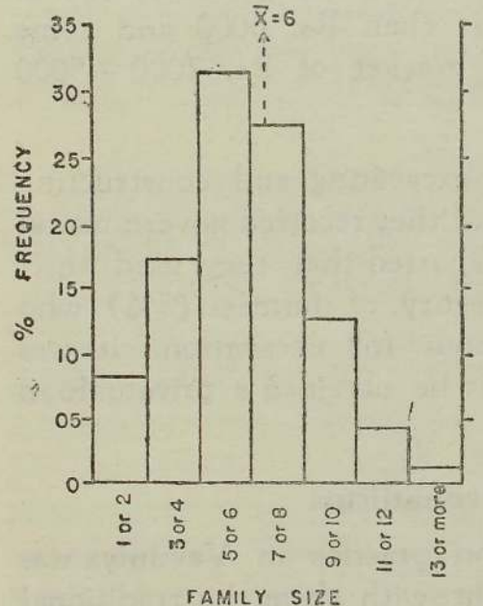
As already mentioned, the lift irrigation practice in Vavuniya was first started by the Tamil farmers who brought with them the traditional water lifting technologies of Jaffna and South India, where some of these methods such as *Kamalai* and *Thula* were in use for centuries (Madduma



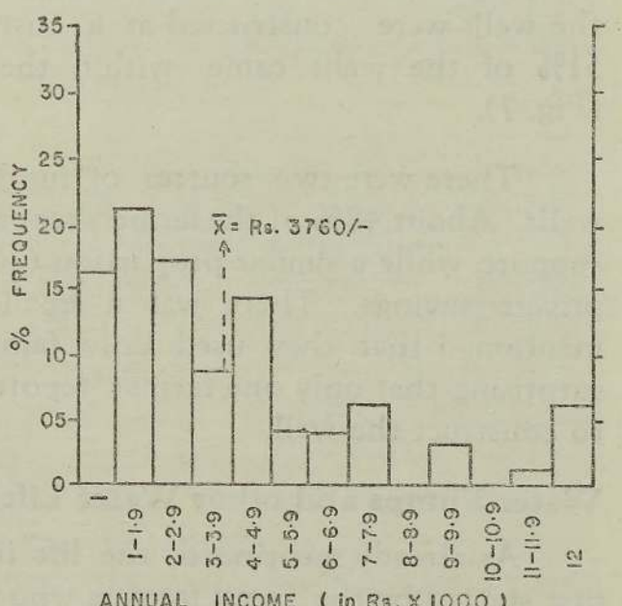
Fig·7 Reported Total Cost of Well Construction in Vavuniya.



Fig·8 Reported Costs of Pumpsets.



Fig·9 Family Size of Farmers Practising Well Irrigation.



Fig·10 Annual Income from Crops Grown Under Well Irrigation.

Bandara, 1977). However, the introduction of the oil powered pumpset was a recent development which became extremely popular during the last decade.

The survey reveals that 88% of the farmers in the sample owned some mechanical device to lift water from the wells for irrigation purposes. Of this number, 61% had oil pumpsets, 22% had *kamalai* and 4% reported that they use *thula*. A small number of farmers (1%) used both *kamalai* and *thula*. During the field survey, it was observed that even some Sinhalese farmers have started using a modified version of *thula*. In general *thula* and *kamalai* were used by relatively poor farmers who could not afford to buy the pumpsets. On the otherhand, the pumpset had become a sign of affluence and a symbol of prosperity. Some 94% of the pumpsets in use were bought by farmers after 1967, and were generally regarded as new by farmers. In fact, nearly 73% of the pumpsets were found to be less than 5 years old. It was also found that some 89% of the pumpsets were bought new while only a very small proportion (11%) were bought second-hand.

The brand of pumpsets varied widely and at least 7 names were mentioned by the farmers. These included Wolsley, Villiers, Ceygma, Centric, Robin, Banda and Minsi. However, the most popular ones were Indian Villiers (40%) and English Wolsleys (28%). At the time of the survey, Japanese pumps such as Robin were gaining ground fast. Almost all the pumps used (99%) were 2" in diameter, and the great majority of them (72%) had 3·2 h. p. engines. However, there was a small but significant number of pumps (13%) with engines of 4·0 h. p. capacity. Almost all the pumpsets used kerosene as fuel. The great majority of pumpsets (76%) had a capacity to pump 7000 – 9000 gallons of water per hour. The two most popular pumps – the Wolsleys and the Villiers, came within this range.

The great majority (96%) of farmers in the sample reported that the performance of their pumpsets was good, and only a small minority (4%) had complaints. This is not surprising in view of fact that a large proportion of pumpsets were bought new during the 1972 – 75 period. Most complaints, as could be expected, came from the farmers who owned second hand pumpsets. The price of pumpsets varied between Rs. 1000 and Rs. 10,000 depending on their diameter, power, brand and of course on the year of purchase. The price of the great majority of pumpsets (64%)

9. The figures indicate the costs incurred by the farmers during the time of constructing the wells. Therefore they do not necessarily indicate the present costs.

ranged between Rs. 2000 and Rs. 4000. The relatively high frequency of pumpsets in the price category of Rs. 5000 to Rs. 6000 actually indicates the price of new Wolsley pumpsets at the time. *(See Fig. 8).*

There was an important minority of farmers (11%) who hired pumpsets from richer farmers when they became absolutely necessary. The charges were based mostly on the number of hours used and the usual rates were either Rs. 5 or Rs. 10 per hour, without fuel. There was an isolated case where a farmer hired a pumpset on a monthly basis for Rs. 250 per month.

It was an equally common practice to hire *kamalai* on a daily paid basis. The hiring charges for *kamalai* ranged from Rs. 25 to Rs.35 per day. The hiring of *thula* was reported only by a small group of farmers (5%) and the hiring charges did not usually exceed Rs. 15 per day. The hiring of these traditional lift devices had often become necessary due to the difficulties of obtaining pumpsets at needy times. However, the use of these methods provided more employment to the rural poor and an opportunity for the farmer to make use of the idling bullocks during the dry season. On the other hand, mechanical as well as economic efficiency of the traditional lift devices appears to be rather poor. Assuming that a *kamalai* hired for Rs. 30 per day would lift 2000 gallons in a day, and a pumpset hired for Rs. 15 per hour (with fuel cost added) would lift 1000 gallons in 2 hours, the cost of a unit of water lifted by *kamalai* would at least be five times higher than that of using a hired pumpset. In this connection it should be mentioned that most wells do not store more than 10,000 gallons of water at the beginnig of the dry season and the recuperation rates are not high in the hard rocks. Therefore, it may be argued that, although, the use of *kamalai* is more expensive in terms of the cost of a unit of water lifted, in certain ways it is better suited to the ecological and human conditions of the area.

The Irrigated Lands: Their Physical and Tenurial Characteristics

As noted earlier, the great majority of wells in the sample were located in what is commonly considered as 'highlands'. The survey reveals that a large proportion (68%) of these highland blocks were lands granted to farmers by the government under the provisions of the Land Development Ordinance on the usual 99 year lease. Nevertheless, 26% of the farmers in the sample were owner cultivators and there was a small minority (6%) of tenant cultivators who hired the land with the well for specific periods. In the case of hired lands, land rents varied between Rs. 100 and Rs. 500 per acre, while the largest proportion came within the

category of Rs. 100 to Rs. 300 (67%). As will be mentioned later, it is interesting to note that many of these tenant farmers thought that their investment on well irrigation was not worthwhile.

A wide variation in the size of land owned by individual farmers was also observed. This ranged from less than 1 acre to over 35 acres. However, the bigger farmers who owned above 10 acres were only a small minority (04%). It was the small farmers with holdings of less than 4 acres who constituted the bulk of the sample (70%). The relatively prominent frequency of farmers (14%) who owned 5 – 6 acres land indicate the groups of retired junior government servants who received larger blocks of lands in the 1950s, as at Samalankulam.

The great majority of farmers in the sample (96%) reported that they had no paddy lands. Therefore, it is logical that they had to make the best use of the only parcel of high land they owned. This had undoubtedly compelled many farmers to excavate wells and start lift irrigation to increase the productivity of their highlands. These farmers who resorted to the practice of lift irrigation actually formed a 'landless class' in the eyes of the traditional *purana* villagers since they do not own any paddy lands. The important fact here is that farming based on well irrigation is effectively providing a livelihood to those farmers who would otherwise have had no choice but to become a class of truly landless agricultural labourers. The ownership of paddy lands which receive free irrigation water on the other hand appears to have acted as a disincentive to embark on lift irrigation especially among the Sinhalese farmers.

The family size of the farmers was also found to be an important factor that induces farmers to go for well irrigation. It is directly connected with the supply of labour for well excavation as well as with the cultivation of labour intensive cash crops. According to the information collected for the survey, the total number of members in a farm (including resident relatives) varied between 1 and 13. But the most frequent category was that of 5 – 8 members (fig. 9). However, the available information is hardly adequate to suggest that larger families had a greater tendency to go for well irrigation than the smaller families.

Land owned by an individual farmer in the 'highlands' was often found to be in a single block, and therefore presents an interesting contrast to the highly fragmented traditional *paddy* lands. As a part of the field survey, the acreage of the plots of land around each well was recorded. These records indicate that 79% of the plots were less than 4 acres in extent while only 1% of the farmers had plots as large as 4 – 5 acres.

The general compatibility of these figures with those of total land ownership discussed above corroborates the view that highland holdings are less fragmented. This reflected to a large extent the effect of the Land Development Ordinance which is designed to discourage among other things the practices leading to land fragmentation.

The proportion of land under irrigation around wells at the time of the survey was another important parameter which was recorded in the field. However since the survey took place during the dry season (in June, July and August) the irrigated land as expected was at its minimum extent. Thus only 59% of the farmers in the sample had some irrigated crops around their wells at the time of the visit. Of these farmers, the majority (57%) were irrigating parcels less than ½ acre in size. 26% of them had ¼-1 acre blocks while 13% had 1 - 2 acre blocks. Only 4% of the farmers who had some crops around their wells were irrigating blocks as large as 2 - 5 acres.

Having recorded the approximate extent of land under irrigation around each well, the farmers were asked to give reasons for not cultivating their entire blocks of land. As expected, a considerable proportion of the farmers who responded to this question gave inadequacy of water (32%) as the single most important impediment to dry season cultivation. However, it is interesting to compare the responses of farmers who gave more than one reason for not cultivating their entire block of land around the wells. A considerable number of farmers combined either 'not enough labour' or 'cannot bear investment cost' with the general problem of 'not enough water'. The same picture emerges, even if we go by the individual respones related to each constraint. For example, those who mentioned water as a constraint either singly or in combination with another factor represented 89% of the sample, those who mentioned lack of pumpsets as a constraint represented 30%, those who mentioned labour as a constraint represented 32% and those who mentioned capital as a constraint represented 39%. In fact, the lack of a pumrset is also a part of the problem of the lack of capital since it forms a basic item of capital investment. It appears therefore, that apart from the inadequacy of water, the lack of capital and the labour supply are the biggest constraints to the development of well irrigated agriculture in Vavuniya.

Although, the lack of capital is an obvious constraint which is not difficult to understand, the inadequacy of labour appears to be a much more complex issue. Can it be interpreted as an indication of the fact that more people can be absorbed to agriculture based on lift irrigation? Although, the seasonal migration of labour to this area exists at the times

of harvest, a general inadequacy of labour for agriculture based on lift irrigation does not appear to agree well with the relatively large sizes of farm families already engaged in well irrigation, and who reported labour shortage as a problem.[10] High demands for labour in the cultivation of labour-intensive crops provides a partial explanation to this problem. However, it is likely that there are other unknown factors such as the age structure and the attitude of people to work, that contributes to the general inadequacy of labour. Whatever the actual reasons behind this state of affairs are, it is clear that well irrigation can be employment generating and perhaps provides a new approach towards the solution to the growing problem of unemployed youth in the rural areas.

Crops and Cultivation Practices

The names of at least 13 crops grown under well irrigation were mentioned by the farmers in the sample. These included chillies, groundnut, onions, paddy, vegetables, plantains, gingelly, cowpea, black gram and green gram, saffron, sugar cane and a variety of perennial crops. Of these crops, the most important monocultures were chillies, groundnuts and onions. However, interculture is a much more common practice where various subsidiary food crops are grown in combination with chillies which is unquestionably the most dominant crop in the area. Thus chillies and onions and chillies and groundnut appeared to be the most popular crop combinations. The dominant place occupied by the chillies at the time of the survey was mostly influenced by the favourable market conditions which prevailed during the preceding 2–3 years. Although the price of chillies fluctuated violently in the market in the mid 1970s, it always fetched a price which covered the farm costs and left a reasonable margin to the farmer. It is also a crop which could be kept in storage for several months without serious insect damage if properly packed. This helps the farmer at least in a small way to release the crop to the market when the prices become favourable.

During the rainy season (or *maha* season from October to December) almost all farmers grow highland rice which forms the staple diet of the people. Normally, the farmers use $\frac{1}{2} - \frac{3}{4}$ of their lands for cultivating rice during the wet season. The rest remains under vegetables and subsidiary cash crops. Although these subsidiary crops give way to rice during the *Maha* season, they become the dominant crops during the *Meda* season (or intermediate season, from January to April) and during the *Yala* season

10. Since the information collected during the survey relates only to the families of farmers practising well irrigation, it is not posible to say whether farmers with larger families had a greater propensity to go for well irrigation.

(or dry season from May to September). The irrigation wells are only occasionally used during the rainy season, especially when a crop failure is imminent due to the failure of monsoonal rains. Therefore, the major function of an irrigation well during the rainy season is as a supplemental or standby well which provides some form of insurance. Wells are heavily used during the intermediate season (*meda*) when the water table is relatively high and the supplies are quite satisfactory. In the dry season (*yala*), inadequacy of water in many wells restricts the extent of land irrigated and if the water supply becomes too poor, the farmer often gives up irrigation completely.

Income from the Lands under Lift Irrigation

The total declared incomes from crops grown with the help of well irrigation ranged from less than Rs. 500 to Rs. 20,000 per annum for farmers in the sample. However, the income of the great majority of the farmers (61%) varied between Rs. 1000 and Rs. 5000. While 16% of the farmers reported receiving incomes less than Rs. 1000, 22% of the farmers reported receiving incomes above Rs. 5000. This represents an average annual income of Rs. 3760 for a farmer in the sample. It also indicates an average return of Rs. 1545 for an acre of land irrigated by wells. However, in view of the rather skewed distribution of incomes, (see fig. 10) the average values do not bring out the full story.

Although no comparative information is available, field observations indicate that the level of income of an average farmer practising well irrigation was generally higher than that of his counterpart in the *purana* village who did not practice well irrigation. It would also be interesting to compare the income level of farmers practising lift irrigation with that of some categories of white-collar workers in the government service. It is recognized that such comparisons are notoriously difficult to make particulary due to dangers inherent in using declared farm incomes, and fluctuating market conditions. Fortunately, at the time of the survey, the price of chillies was more or less stabilized at Rs. 10 per pound and this helped to maintain some stability in the farm incomes. Bearing all these considerations in mind, if one attempts to make a broad comparison of farmers' and white collar workers' incomes, it appears that, if properly organized, well irrigation can easily attract people who would otherwise seek low paid jobs in the government service. Incomes earned by more progressive farmers who practice well irrigation also indicate that there is scope for an energetic farmer to earn incomes far higher than what he would be able to earn as a lowly paid junior government servant.

Farmer Perceptions

At the end of the interviews, two questions were asked on the perception of the farmers of the whole experience of the practice of well irrigation and its benefits. One question was whether the farmer considers his investment on well irrigation worthwhile. For this question, 61% of the farmers responded 'yes', while 35% said 'no'. About 4% of the farmers said they don't know whether to say 'yes' or 'no'. Those who gave a negative response were asked to give reasons for thinking that their investment was not worthwhile. The great majority of the farmers who responded to this question (89%) gave inadequacy of water as the overriding reason. The remaining 11% attributed it to a variety of reasons such as poor soils, the scarcity of labour etc.

The second question was whether the farmer would recommend the spread of well irrigation to other parts of the Dry Zone. In response to this question some 96% of the farmers said they would recommend this practice for the other part of the Dry Zone and surprisingly only 4 farmers (1%) maintained that they would not recommend it. The remaining 3% did not know what to say. However, the great majority of the farmers who recommended the spread of this practice added the rider that their recommendation applies only to places where water is available in adequate quantities.

Some Conclusions

It appears from the information presented in the foregoing analysis that the sample was more or less dominated by the 'landless' farmers (ie. the farmers who did not possess traditional paddy lands) with only highland allotments, and Tamil speaking respondents. It is therefore, likely that the results of the survey represent mostly the attitudes and perceptions of the above groups. Although the findings of the survey do not provide clear and conclusive answers to many of the questions involving well irrigation, they definitely throw much light on the issues under investigation.

(a) The degree of risk involved in excavating wells in the hard rock areas like Vavuniya is brought out by the likely chances of encountering the bedrock, the proportion of wells that run dry during the dry season, and the extent of irrigated crops around the wells at the time of the survey. The survey indicates that 19% of the wells run dry during the height of the dry season and 41% of the farmers had no irrigated crops around their wells at the time of the survey (i.e. in June, July and August 1977). It was noted that many of these 'dry

wells' are used during the intermediate season by bottom borcholes and other methods. It was found that a farmer can be highly confident (97%) that he will not encounter the bedrock only up to a depth of about 3 metres from the surface and it becomes a gamble after reaching a depth of about 8 metres when excavating wells in the highland allotments.

(b) On the question of whether well irrigation is employment generating, the survey appears to provide a somewhat positive answer. Nearly 96% of the farmers in the sample had no traditional paddy lands and their major source of livelihood was the highland allotment which was made productive through well irrigation. It should be recalled that, among other things, one of the important reasons for not cultivating the entire block of land around the wells was the 'inadequacy of labour'. This indicates that more unemployed people can be absorbed to agriculture based on well irrigation, even at the present level of development. If the necessary agricultural capital and pumpsets could be provided in an organized way, well irrigation may prove to be a new avenue for unemployed youth in the rural dry zone.

(c) The information relevant to the hypothesis on whether farmers perceive well irrigation as an economically feasible venture indicates a pattern of mixed response. However, 61% of the farmers thought that their investment is worthwhile, and a large majority of them (96%) recommended the spread of the well irrigation practice to other parts of the dry zone if the water is adequately available. It should be emphasized that these are only farmers' perceptions and may not necessarily agree with the results of a conventional cost-benefit analysis which was not undertaken in this study.

A general consideration of the whole gamut of factors involved in agriculture based on well-irrigation in the country around Vavuniya demonstrates the fact that the present levels of income could be greatly improved through a more scientific siting of wells, a more rational choice of crops and the provision of more infrastructural and other facilities such as initial capital and farm implements, particularly the pumpsets and related services.

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The Management of Irrigation Systems in Sri Lanka: A Study in Practical Sociology*

M. P. MOORE

Introduction

The purpose of this paper is to demonstrate that a relatively simple and jargon-free sociological analysis can provide some explanation of the workings of one branch of the public service and indicate possible solutions to problems of poor performance. The branch of the public service studied deals with the construction and management of large-scale canal irrigation schemes. For ease of reference the persons involved will be described as the 'irrigation bureaucracy'. The focus is on officials working directly on irrigation schemes rather than on administration. The discussion relates mainly to the more senior cadres. The cadres with whom we are concerned perform a wide range of tasks. These tasks fall into two distinct categories: investigation, design and construction (henceforth 'design and construction') on the one hand, and operation (i. e. water management) and maintenance on the other. The analysis sets out mainly to explain why levels of performance in operations and management appear so much lower than in design and construction. In order to render the arguments intelligible to non-specialists it is necessary to provide a considerable amount of background information on the operation of canal systems and on the structure of the irrigation bureaucracy. This information is intended only to orient the present analysis, which deals with only one aspect of water management. The fact that other aspects of the subject are not discussed does not mean that they are not of equal importance.

The importance of improved water management does not require much emphasis. The economic prospects of Sri Lanka depend, to a large extent on the exploitation of the agricultural potential of the Dry Zone.

* The author is deeply indebted to: a) a very large number of people in Sri Lanka who provided information; b) his colleague, Robert Wade, whose research, as yet mostly unpublished, on the management of canal systems in India provided an invaluable stimulus and introduction to the problem; and c) to Robert Chambers, Ron Dore, Marcus Karunanayake, Michael Lipton, John Sender and Robert Wade for very helpful comments on an earlier draft of this paper.

And this in turn depends largely on the successful management of existing and planned large-scale irrigation schemes. Sri Lanka is not alone in finding that the performance of existing schemes is well below expectations and physical potential.[1] Although no strict performance comparisons have been made, informal estimates suggest that the level of management in Sri Lanka is among the worst in the world. This is in marked contrast to the excellent reputations of Sri Lankan civil engineers for design and construction of all kinds of schemes, including irrigation schemes.

The factors leading to poor management of irrigation schemes may be deeply rooted. Equally, and this can scarcely be stressed enough, the potential economic and social benefits of improved performance are very large.[2] They have considerably increased as a result of the decision to accelerate the construction of the Mahaweli project, since there is concern about the adequacy of supplies of water to irrigate planned acreages. Supplies will be adequate only if rates of water use per acre can be reduced well below those current on other large schemes.

One kind of reaction to poor water management has been to seek ways of by-passing the problem. For example, in other parts of South Asia there has been a shift of private and public investment to the exploitation of groundwater by the use of tubewells. This obviates the management problem of large canal organisations and gives the owners a direct incentive to use water efficiently, since the use of water costs money. This is at best a very limited option for Sri Lanka since it does nothing to generate a better return on enormous existing investment in canal systems. Further, in most areas of Sri Lanka's Dry Zone groundwater supplies are meagre, and they are often protected by layers of crystalline rock.[3] Tubewells are not feasible.

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1. P. R. Crosson (1975) "Institutional Obstacles to Expansion of World Food Production", *Science*, 188, p. 522, remarks that many Third World countries have been disappointed with the results of large investments in big canal irrigation schemes and that ".... irrigation building institutions have performed better than irrigation management institutions".

2. R. Chambers, 1975 "Water Management and Paddy Production in the Dry Zone of Sri Lanka", *Occasional Publication Series No.* 8, Agrarian Research and Training Institute, Colombo, p. 64.

3. The extent of usable groundwater supplies is controversial. C. M. Madduma Bandara ("The Prospects of Recycling Subsurface Water for Supplementary Irrigation in the Dry Zone" in S. W. R. de A. Samarasingha (ed.) *Agriculture in the Peasant Sector of Sri Lanka*, Ceylon Studies Seminar, Peradeniya, 1977.) argues that the potential has been underestimated. However, the fact that he uses the term "supplementary" indicates the limited extent of the potential.

Another suggestion is water charges to force farmers to economise on water use.[4] This poses major technical and management problems. It would require very high levels of supervision, policing, maintenance of structures, observation and measurement of water use, and water control. It will only become a policy option after the bureaucracy is in a position to control and measure the flow of water. At present they can do little of either.

A third view is that one should concentrate on bringing the supposed beneficiaries of the system, the cultivators, into the management. It is commonly argued that, if made responsible for management, farmers would run the system effectively because they, unlike irrigation staff, have a direct material interest in doing so. There is a certain potential here. In several parts of South Asia it is being recognised that there are advantages in turning over local responsibilities to farmer organisations. These may be collectively responsible at the local level for the clearance and maintenance of channels and for water distribution among farmers.[5] In effect this amounts to a system of informal contracts between farmers' groups and the canal management: the latter contracts to supply water if the former maintain their part of the physical infrastructure and distribute water. Sri Lanka has moved a little in this direction with the recent decision to appoint 'Representative Farmers' to oversee maintenance and water distribution at the level of the individual field channel. The element of collective and contractual responsibility is however low.

More could be done in Sri Lanka to develop responsible farmers' groups. There are however three reasons for believing that the main effort in water management must come from reforming the irrigation bureaucracy. The first is that there are major conflicts of interests between categories of farmers notably 'top-enders' and 'tail-enders' (see below), which seriously limit the potential for management by farmers. Such involvement of farmers must take place within a 'steel framework' of overall control and discipline on the part of the irrigation bureaucracy. This leads directly to the second reason. There are a series of vicious circles operating in respect of water management in most schemes; they are outlined below. In most cases the consequences are that the 'irrational' or non-optimal behaviour of one category, the farmers, only elicits corresponding behaviour from the irrigation bureaucracy and vice versa. Levels of trust

4. e.g. International Labour Office, *Matching Employment Opportunities and Expectations: A Programme of Action for Ceylon*, Geneva, 1971, p. 102.

5. H. C. Hart, (1978) "Anarchy, Paternalism, or Collective Responsibility under the Canals", *Economic and Political Weekly*, Vol 13 (51 & 52).

and goodwill between the two categories are low. Only the irrigation bureaucracy can take the initiative to break these vicious circles of bad performance and bad faith. There is now wide agreement among water management specialists that a dependable and well-regulated supply of water to the farmer is a precondition for good water management at the farm level, while the reverse is not true: there is no causal link between good farm-level practice and better management of schemes as a whole.[6] The third reason is that farmers' organisations have a very poor record in Sri Lanka. The gap between acceptable and actual levels of performance is far greater in the case of farmers' organisations than in the case of the public service. It is thus thought that administrative resources should concentrate on problems where a solution seems nearest: within the public service. The implication of these arguments is that if water management is to be substantially improved, this must stem mainly from better performance of the irrigation bureaucracy.

Existing Practice

There are in principle two main ways of scheduling the delivery of water to fields under canal irrigation. They may be described as 'demand scheduling' and 'supply scheduling' according to whether the main decisions lie with the user (the farmer), or the supplier (the management) respectively.

Demand scheduling is practised in some countries, including the United States, Australia, Italy and Spain. The individual farmer decides how much water he requires and at what time. He informs the management of his requirements, and they meet them as nearly as possible and charge him accordingly. The successful operation of such systems depends partly on such variables as the physical area irrigated. The larger the area, the more important it is to have the use of advanced communications technology, so that by means of telephone or radio the individual farmer, the management office and the irrigation fieldsman can be in constant contact in order to arrange details of the volume and timing of supplies. Another factor is farm size, absolute and relative to the size of the scheme. The larger the amount of water used by each farmer, the more economical it is to record and charge on an individual basis. Farm size (and physical layout of the channels) also affect the amount of water lost in conveyance through channels: if water is continually switched from one channel or

6. e.g. R. C. Lazaro, D. C. Taylor and T. H. Wicknam "Irrigation Policy and Management Issues: An Interpretive Seminar Summary" in International Rice Research Institute, *Irrigation Policy and Management in Southeast Asia*, Los Banos, Philippines, 1978, pp. 4-5.

distributary to another in relatively small quantities to meet the demands of individual small farmers, then a great deal is lost in continually re-wetting channel beds and sides. Demand scheduling can never work in a pure form. Factors such as faults in the physical structures or in aggregate scarcities of water mean that the management cannot meet every demand for water. Bargaining has to take place over quantities and timing, and for this reason as well a good communications system becomes all the more important. In the absence of efficient field communications, aggravated by a preponderance of very small farms, as in Sri Lanka, demand-scheduling obviously has at best very limited application.

The principle followed in Sri Lanka has always been that of supply-scheduling. The release of water conforms to a cultivation calendar agreed on before each season by a meeting of farmers and officials; water is provided for the agreed period of tillage; the supply is reduced during the period of crop growth; it is cut off altogether at the end of the agreed cultivation period – on the presumption that all farmers have sown a rice variety of the same duration and that all have planted on time. While this at least is what happens in principle, practice is somewhat different, and to some degree inevitably. The perfect functioning of a supply-scheduled system is, just as in the case of a demand-scheduled system, premised on either perfect foreknowledge of total water supplies or of the existence of supplies which exceed the largest possible demand, and on the ability of the management to actually control water distribution. It is rare that these premises are fulfilled. All water management involves, among other things, the reconciliation of conflicts between the management and farmers and/or between farmers.

What actually is done to reconcile these conflicts in Sri Lanka varies from scheme to scheme; a description could occupy many hundreds of pages.[8] The following brief sketch is adequate to characterise the general process and to provide a factual background for the later analysis of the working of the irrigation bureaucracy.

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8. A great deal has been written about the management of canal systems in Sri Lanka, but mostly in official documents and consultants' reports not widely available. This may be one of the reasons why the gravity of the situation in the Dry Zone irrigation schemes is not generally appreciated. The only publicly-available critiques are by R. Chambers: op. cit. and "On Substituting Political and Administrative Will for Foreign Exchange: The Potential for Water Management in the Dry Zone" in S. W. R. de A. Samarasinghe (ed.) *Agriculture in the Peasant Sector of Sri Lanka*, Ceylon Studies Seminar, Peradeniya, 1977. The situation in India however is very similar, and a series of articles in the *Economic and Political Weekly* provide a good introduction to the issues. There are five by R. Wade in the following volumes: 10(26), 1975 10 (44&45), 1975; 11 (13), 1976; 13 (12), 1978; and one by H. C. Hart in 13 (51&52), 1978.

The following are the main points:-

1. Only a small minority of cultivators actually attend the seasonal 'water meeting', have any significant say in the decisions, or feel morally obliged to obey them.

2. Mainly because of massive over-use of water by those nearest the tank - i. e. those at the top ends of canals, distributaries and field channels- the aggregate supply of water is frequently inadequate, especially in the dry *(Yala)* cultivation season. Many farmers are uncertain about receiving supplies.

3. For a variety of reasons decisions of the water meeting are not adhered to. Farmers till and sow late, or use a paddy variety of longer duration than agreed. They use political influence to force the irrigation engineers to supply water for longer than agreed. This is another cause of recurrent aggregate scarcity of water.

4. Although water issues are in principle supply scheduled, actual day to day decisions are to a very large extent affected by the demands of users, in accordance with the 'squawk factor': those who shout the loudest are most likely to receive more water all the time there is some available.[9] Those of some political or social standing are most likely to have their 'squawks' heard.

A detailed analysis of how the current situation of low levels of management, of water control and of trust between farmers and irrigation staff has been reached, is beyond the scope of this paper. It is however important to point out that a functioning system of water management is a fragile plant from both the physical and institutional points of view. If one element in the system does not work then this tends to have adverse effects on others, generating a series of vicious circles. It is difficult in any particular instance to plot the trajectory of these vicious circles, but the following schematic reconstruction conveys a sense of the kinds of interactions involved:

Water is uncontrolled, too much is permitted to flow through the distributary and field channels at the top of the system—> the banks of channels and control and check structures are washed out—> ample water reaches the field from all directions—> the cleaning and maintenance of channels and other structures is neglected—> farmers at the top

9. The term 'squawk factor' is borrowed from D. Leonard, *Reaching the Peasant Farmer*, University of Chicago Press, 1977, p. 188.

ends cannot manage with less water as the degraded system cannot deliver to all fields the amounts specified in the design—> 'top-enders' use a great deal of water—> there is insufficient water at the bottom ends of the system—> channels are not cleared as water arrives so rarely that the effort does not appear worthwhile—> the tail-end channels become silted, suffer high percolation losses, and receive even less water—> in the effort to push enough water down to the tail-ends, the channels are overloaded beyond design capacity, causing erosion, overflowing and waste high up the system—> even less water is available for tail-enders in the long run—> when water does reach the tail-end, farmers scramble for it—> if attempts are made to rotate water in distributaries by locking gates, farmers destroy the gates to get as much as possible while water is in the channel—> the actual arrival water at the tail-end becomes even less predictable—> tail-end farmers cannot adhere to cultivation schedules—> they agitate for water issues to be made after the agreed final date—> the canal is not dry long enough between seasons for much maintenance work to be done—> .....

The choice of a particular point at which to demarcate this set of vicious circles for purposes of description was made purely arbitrarily. It is clear that to assign causation or blame in such circumstances is very difficult. Farmers of course do blameworthy things, like breaking gates or neglecting to clear field channels. But there are reasons why they do these things beyond greed and laziness. If a system is managed so arbitrarily and wastefully that a farmer cannot be sure of receiving water next week, then he is tempted to break the gate and take water while it is there. It makes little sense to clear a field channel if either (a) so much water is allowed to flow down that it will reach the fields anyway or, conversely, (b) if the chances of receiving water appear so small that clearing the channel would be a waste of effort, nullified in a few weeks by fresh growth of weeds and the treading feet of men and buffaloes. Conversely, engineers have little incentive to make an effort to get a consensus agreement of farmers on a particular water distribution schedule if a dissatisfied group of farmers are able to call upon a politician to interfere and thus secure more water and wreck the schedule.

Although relationships between farmers and irrigation staff are central to the functioning of irrigation schemes, it is clearly implied in the section above that some of the causes of poor water management are not to be found within the irrigation system narrowly defined. There are two factors of external origin which are of particular weight. The first, normally termed "political interference", has been mentioned. The

bureaucracy is to a large extent subordinate to the short-term demands of politicians responding to pressures from farmers. It has very little effective sanction over farmers who damage control structures – e. g. break gates – in order to obtain more water. Attempts to prosecute offenders have been so often thwarted by the interference of politicians that, at the time of writing, such attempts have almost ceased. The judicial process is anyway very slow and the fines levied on irrigation offenders have been too small to serve as a deterrent. The damage to systems is high in many cases. The author was informed that on one scheme about 40% of all gates are destroyed each year. Equally, political pressures frequently disrupt agreed schedules for water issue. The second external factor affecting water management is the inadequacy of maintenance budgets. A backlog of uncompleted maintenance leads to loss of water and a reduced capacity to control it. Improvements in the functioning of the irrigation bureaucracy do not provide the sole key to better management. They are however potentially important, and it is to this subject which we now turn.

Water Management

In the preceding pages a fairly grim picture has been painted. It is not just that levels of water management are poor. In some cases there is no management at all! This conforms with the terminology which the author several times encountered during conversations with irrigation personnel. It would, for example, be said: 'Oh yes, we *are* practising water management.' The content and tone imply that even to be making an attempt to manage water is a matter for approbation.

In order to make sense of our analysis of the working of the irrigation bureaucracy it is necessary to give some indication of what is involved in water management, There is no unique answer, since there is a wide range of discretion about the way and the degree in which water can be managed. A minimal programme might involve nothing more than opening and closing the sluices from the storage tanks at agreed times, leaving the distribution of water between distributaries and field channels to the combined effects of such factors as farmer behaviour, the losses through damaged or poorly maintained structures, and the total volume of water available. At the opposite extreme, a maximal programme might involve a schedule for the delivery of stated quantities of water to individual fields on a rotation system, and mechanisms to monitor and enforce the fulfilment of that schedule. To be feasible any satisfactory programme for Sri Lanka would be somewhere between these two extremes. It would probably involve the following elements:–

1. An agreed and publicly-announced timing schedule for cultivation operations in each main tract under a tank.
2. A clearly-stated schedule of the amount of water to be delivered to each tract, adjustable according to levels of rainfall and aggregate water supply.
3. The installation and use of water measuring devices to make it possible to deliver water by volume to defined areas (not individual farms).
4. Control devices on all outlets down to the level of the field channel.
5. A programme of rotation of deliveries at the level of main canals, distributaries, and perhaps field channels.
6. A monitoring mechanism to report on the field situation independently of the 'squawk factor'.
7. Effective sanctions against cultivators who break the rules.

From the point of view of present concerns the important thing is not so much the precise content of such a programme as the nature of the work it involves for the irrigation staff. Apart from involving rather a lot of work,[10] it requires three attributes in particular. The first is applied numeracy. This is necessary for the use of measuring devices, for the calculation of irrigation requirements by crop in the light of varying rainfall, for estimating the optimal pattern of distribution of water between different tracts, and for calculating the rates of water loss in conveyance due to evaporation and seepage. The second quality required is human relations ability: to explain plans to colleagues and farmers, elicit their views and support, and help settle the inevitable disputes and misunderstandings. The third quality is closely related: it is flexibility or responsiveness. All delivery schedules must be provisional and continually adapted in the light of such factors as rainfall, aggregate water availability, and departures from schedules caused by, for example, damage to structures, the need to close canals for urgent maintenance, or faulty original calculations. There is a strong case for formulating and adhering as far as possible to publicly agreed and widely known rules to govern water distribution. However, rules must be flexible to deal with the large degree of uncertainty inherent in managing irrigation systems.

10. There was a locally-famous experiment in very tight water control under the Rajangana Tank (Anuradhapura District) in 1976. In conditions of aggregate water scarcity, most of the paddy crop was saved. Inspection of the files however reveals the truly enormous effort on the part of the irrigation staff which this involved

The Irrigation Bureaucracy

When discussing the irrigation bureauracy we refer to two main categories of organisations. The first is the Irrigation Department, now responsible for the management of all except small-scale irrigation schemes.[11] This is one of the oldest government departments, founded in 1900. In the second category are the two special boards functioning in very large schemes still under construction: the Mahaweli Development Board for the Mahaweli project and the River Valleys Development Board for the Uda Walawe project. The Irrigation Department is the focus of this paper. The other boards recruit from the same pool of potential staff as the Irrigation Department, often exchange staff and are in many ways similar. The conclusions reached about the Irrigation Department are of sufficient generality to apply in general terms to the special boards.

There are four main cadres of Irrigation Department staff working directly on irrigation projects:- engineers; technical assistants; works supervisors; and labourers, including *kanganies* (foremen). Labourers have no educational qualifications. Most are casual employees. *Kanganies* are recruited directly from among labourers. *Kanganies* may be promoted up to works supervisors - 80% of works supervisors' posts are filled this way - but they are required to have in addition to 3 years service, at least four credits in the tenth grade school examination, including passes in mathematics, physics and chemistry. The remaining 20% of vacancies are filled by open competition among those with the minimum educational qualifications. There is a narrow channel through which works supervisors can ascend to the level of technical assistant: 10% of the technical assistant posts are filled by works supervisors with at least ten years' experience and six passes at the tenth grade school examination. The remaining 90% of technical assistants' posts are filled by holders of the JTO (Junior Technical Officer) certificate in civil engineering, which is obtained after following a full-time two year course. A small proportion of technical assistants can hope for promotion to engineer: 20% of engineers' posts are reserved for technical assistants promoted strictly according to seniority. They are designated non - Professionally Qualified Engineers (NPQE), and cannot rise beyond the lowest engineers' salary grade (Class 2, Grade 2). The great majority of engineers are recruited after obtaining a degree in civil engineering, usually from within Sri Lanka. A few are recruited after obtaining equivalent qualifications in the form of chartered membership of the Sri Lankan or London Institution of Engineers. There are facilities for part-time study in Colombo, but following the course is not compatible with working outside Colombo.

11. Large-scale schemes are defined as those with a command area of more than 200 acres.

Space does not permit a fuller elaboration of organisational, recruitment, training and reward systems. However, drawing on the information in the above paragraph and related data, one can identify the following set of facts which are relevant to the discussion below:-

1. Possession of educational qualifications is not only necessary for appointment to each cadre; they are regarded as sufficient in themselves at the higher levels. Because of the shortage of trained staff anyone with a degree or a JTO certificate in civil engineering is more or less guaranteed a post as an engineer or technical assistant respectively.

2. Only to a very limited extent do post-recruitment tests effectively discriminate between good and not so good workers. The main example of effective discrimination appears to be the practical examination by which technical assistants can be promoted to the rank of senior technical assistants. For an engineer to advance in his cadre it is essential to obtain chartered membership of either the Sri Lankan or the London Institution of Engineers. This involves both written exams, practical (design) work and an evaluation of job performance. That this is not very discriminatory is evidenced by the fact that almost all engineers receive membership, although some may have to make several attempts. Even more nominal is the examination which newly-recruited technical assistants are required to take after their first year as 'learners'. This must be passed if they are to be appointed. In the last examination for which data are available eight out of thirty-five examinees failed. This, it was said, was because they had not taken the examination seriously and had not worked for it at all; it was expected that all, or almost all, would pass at the second attempt. Thus in general the qualifications which really matter are those obtained in the formal education system. In-service examinations do not comprise a major barrier to advancement after recruitment since they are set at such a level that most people will pass, even if some have to try several times.

3. Of the three 'in-service' examinations mentioned above, two are taken soon after recruitment: the qualifying examinations for 'learner' technical assistants after one year, and the examination for chartered membership of the Institution of Engineers after a minimum of four years. Insofar as the need to pass these examinations constitutes an incentive for good work performance, this does not operate for more than a small fraction of a person's career.

4. Almost all salary increases and advancement both within and between ranks are governed by length of service ('seniority'). This is especially true at lower levels. Some very limited rewards accrue to those who pass 'in-service' examinations (see above), and very little for good work performance per se.

5. The promotion channels between cadres are narrow. Most recruits can expect to finish their career in the cadre into which they entered service. If promotion to the next cadre is obtained, this occurs late in a person's working life, making it almost impossible for him or her to undertake further formal education in order to acquire the same formal technical knowledge as colleagues in the same cadre.

6. Each of the main cadres tend to form very separate social groups, since they differ markedly in educational background, income, and, because of paucity of inter-cadre promotions, in work experience. The salary scales of works supervisors do overlap a little with those of technical assistants, while theirs in turn overlap with those of engineers. But the averages are very different. The gap is especially marked between engineers and others. Thus, while the mid point in the works supervisors' pay scale[12] is 59% of that of the technical assistants, the mid-point in the technical assistants' pay scale is only 44% of that of engineers. Comparison of minimum and maximum points on the scale leads to the same conclusion. The same pattern is apparent in respect of the predominant social class of origin of the members of the different cadres.

Engineering (and medicine) comprise the most prestigious professions in Sri Lanka, those recruited for training are from the best performers in school science examinations, and belong to the highest social strata. Admission to the university engineering faculties is from those with the best school examination results in physics and maths.[13] Good examination results in these subjects are concentrated in a few schools with good facilities and which serve mainly the children of the more wealthy.[14]

7. Irrigation Engineers comprise part of a civil engineering profession which, by virtue of a relatively homogeneous social background and common educational experience, comprises a relatively distinct social group with a strong sense of identity. The behaviour and attitudes of engineers

12. All information on salaries relates to the scales in force in October 1978.

13. R. P. Dore, (1976) *The Diploma Disease*, London, George Allen and Unwin, pp. 59–60.

14. The gap in both salary and social origin is greater between Works Supervisors and Technical Assistants than it is between the latter and Engineers.

are strongly influenced by professional colleagues, and a reputation for professional expertise is a source of group esteem. In sum, there are important non-material factors affecting engineers' work performance.

8. Despite the fact that political and personal factors sometimes affect promotion decisions at all levels, professional expertise, as well as seniority, do play a role in the appointment of engineers to senior posts. This is almost unavoidable, since the consequences of appointing incompetent persons could be very serious. Engineers have more incentive than technical assistants or more junior staff to work well, since they are more likely to be rewarded by promotions. This receives implicit recognition in salary scales, which provide engineers with the greatest chance of advancing beyond their initial salary scale. At the bottom of the hierarchy, the rewards of labourers are almost fixed according to the number of days they work, with some increases with seniority. For works supervisors the highest salary is 182% of the initial salary; for technical assistants it is 237%; and for engineers it is 297%.[15]

9. It is clear to engineers that they are more subject to professional norms than, say, the technical assistants directly beneath them. This may strengthen the view that technical assistants (and other subordinates) are, apart from being less skilled than engineers, also morally inferior, being more prone, for example, to the temptations of corruption.

10. The relatively homogeneous professional group to which irrigation engineers belong is a *civil engineering* profession. That is to say, almost all its work, training and professional esteem lies in investigations for and the design and construction of physical infrastructure: roads, drainage system, buildings, bridges, dams, etc. However, irrigation engineers also have responsibilities for the operation and maintenance of irrigation systems. They receive very little training in these latter topics, and almost none at all in water management.[16] The same is true of those who become technical assistants by taking the JTO course. The examinations of the Institution of Engineers cover mainly design and construc-

15 · The number of points on the salary scale is similar for each cadre: thirty-two for Works Supervisors, thirty-four for Technical Assistants, and thiry-eight for Engineers.

16 · The Irrigation Department did run a water management training course for its staff for a brief period in 1976-7, but for a number of reasons this has ceased to function.

tion; operations and maintenance of irrigation systems do not feature.[17] Thus irrigation staff receive little or no formal training in the operation and maintenance of canal systems, and good performance in this area is not rewarded by esteem among their professional reference groups.

11. The average engineer can expect to spend only a small fraction of his or her working life engaged in water management, and thus has little incentive or opportunity to develop expertise in the field. Engineers' posts fall into three main categories: headquarters work (design, experiments, administration, etc.); on-site investigation, design and construction work; and territorial field posts (known as range posts). The country is divided into fifteen Ranges, each in the charge of a Chief Irrigation Engineer. Below them are fifty-nine Divisions, almost all in the charge of an Irrigation Engineer. It is only in range posts (i.e. in Ranges and Divisions) that engineers are at all likely to have water management responsibilities. Yet not all range posts cover large irrigation schemes and, more importantly, the primary duties of range engineers are for all small – scale new construction work in their areas. As of the end of 1978, just under 30% of all engineers in service with the Irrigation Department were in range posts. Since only a small proportion of their time is spent in water management one can see that the typical engineer will spend only a small fraction of his working life engaged in water management.

12. Technical Assistants and other junior staff tend to spend more of their working time in water management duties than do engineers.

13. Irrigation Department staff, especially engineers, tend to live either in Colombo or in the surrounding rural areas. Postings away from home are unpopular, and may sometimes be used as punishments. However, all large-scale irrigation schemes are in the Dry Zone and distant from Colombo. Those range posts which have major water management duties are typically unpopular. The holders tend to return home to the Colombo area as often as possible, perhaps every weekend. Because of the travelling time involved they may not be available for work for a large proportion of the week, although neither farmers nor irrigation water are known to rest at weekends. Further, they do not develop good social contacts with the population of the area they serve.

17. The reason for this is quite straightforward: since the examination caters for the whole civil engineering profession it cannot take cognisance of a special kind of activity – water management – which is relevant to only a fraction of the work schedule of a minority of civil engineers.

The Effect of the System on Work Performance

We now come to the central part of the analysis: how certain aspects of the personnel structure of the irrigation bureaucracy impede efficient water management. It is argued that this works in five main ways. Firstly, patterns of recruitment and service impede effective social interaction between public servants and cultivators and encourage the bureaucracy to hold to a collective view of water management problems which is both false and an impediment to more effective organisation. Secondly, the patterns of recruitment, rewards and promotion within the irrigation bureaucracy impede the kind of internal communication and working relationships which are especially important for water management.

Thirdly, performance in formal written examinations, which is the main criterion for recruitment of irrigation staff, is not always a good indicator of work ability, especially ability in water management. Fourthly, there are in general few incentives for good work performance, this has an especially adverse effect on water management. Fifthly, the organisation of the bureaucracy consistently if unwittingly results in the devaluation of performance in respect of water management and maintenance activities while correspondingly placing high value on design and construction work.

There are two themes intertwined in the analysis. One is the factors conducive to poor work performance in general. The other is the factors which specifically discourage good performance in the operation and maintenance of canal systems, leaving most incentives in the area of investigation, design and construction.

Although the irrigation bureaucracy is internally divided into clearly separate social-cum-occupational strata the bureaucracy as a whole is very distinct in background education and life experience from the mass of the cultivating population affected by water management decisions. This is especially true of the engineers and technical assistants, who have had the experience of a lengthy higher education course. In the first place the possession of the school qualifications adequate to enter on higher education indicates in the great majority of cases a social background considerably more elevated than that of the mass of dry zone farmers.[18] Secondly, the actual experience of higher education has a major socialising effect, tending to promote a strong sense of identification with other

18. The author is to publish separately information showing the very high correspondence even at village level between socio-economic status and achieved level of educational qualifications.

educated people, especially those from the same or similar institutions. Thirdly, the educated tend to be both born in or near the urban areas, and strongly attached to these areas, – especially Colombo and Jaffna – which are remote from the main canal irrigation schemes. Those in government service do not normally develop strong social roots in the dry zone areas to which they are reluctantly posted. Their main social contacts while in field postings are with other government servants. For all these reasons the members of the irrigation bureaucracy, especially the more senior, tend neither to have nor to develop a sense of empathy with the problems of the farming population they serve. This lack of contact and empathy permits them to cling to diagnoses of water management problems which falsely lay all the weight of blame on the farmer.

It was noted above how complex is the interaction of physical and institutional factors on canal irrigation schemes, how easy it is to fall foul of vicious circles, and how difficult it is to attribute blame. Many engineers and technical assistants understand these kinds of points, but there are many who do not. And the lack of empathy or contact with farmers preserves this ignorance. There is a tendency to blame farmers for all deficiencies, and thus to conceive of improvements in water management as beginning with exhortation or coercion of farmers.[19] Yet it is unlikely that farmers will actively cooperate in water management except within a stable environment of guaranteed water supply. The extent of social distance between farmers and irrigation staff hinders the latter from even appreciating the problems involved in water management.

Our second main argument though analogous to the first, applies to relationships within the bureaucracy. Because of substantial differences in social background, education, work experience and exposure to professional norms, the main cadres of staff tend to form very separate social categories. Communication between groups is inhibited, and such communication as does take place occurs in an environment of social, occupational and professional hierarchy. That is to say, communications from above tend to take the form of instructions, and those from below to be reports or requests. A

19. The professional journal of the Irrigation Department contains an arricle by a very senior Engineer which lays all the blame for poor water management on farmers or other institutions (apart from the Irrigation Department) serving farmers. (A. Maheswaran "Engineers' Role in Water Management", *Jalavrudhi* 1 (2), 1976). This closing of professional ranks to cast all blame on 'un-educated', 'ignorant' farmers is not limited to either Sri Lanka or irrigation. It does however seem prevalent in the irrigation case. A study in the Philippines revealed that common (and derogatory) stereotypes of farmers' use of irrigation water were simply false (R. P. de Los Reyes "Stereotypes and Facts in Irrigation Management: Preliminary Findings from a Case Study of a Philippine Communal Gravity System", in International Rice Research Institute, op. cit.).

degree of command-compliance is inevitable in a hierarchy. The point is that there tends to be relatively little of other kinds of communication, especially of an informal or non-work nature. This may not matter much where the tasks can be performed efficiently without much 'feedback' from lower levels of staff. This is not the case in water management. An efficient subordinate would not await a request or a formal reporting schedule to advise on such matters as the impending breach in a canal bank, damage to sluice gate, the fact that a heavy overnight shower of rain occurred in a particular location, making a reduction in canal water supplies feasible, or the fact that a particular farmer appeared to be preventing water from reaching the fields of other farmers lower down a channel. The more informal and frequent are social relationships between different levels of staff, the greater the likely amount of such informal reporting.

The third point can be stated very briefly. The main criterion for the recruitment of irrigation staff, especially at senior levels, is the ability to pass written examinations in certain kinds of subjects. Ability to pass examinations is not necessarily indicative of ability in water management. In particular, facility in human relationships and responsiveness to changing circumstances are important for water management, but are not tested in the procedures for staff selection. The existence of applied numeracy is probably effectively tested in the formal education courses undergone by potential engineers and technical assistants. However, works supervisors and other junior staff also require this skill if they are to play an effective role in water management, and the evidence available to the author suggests that this is not effectively tested in secondary level exams. A separate test is implied.

If one is prepared to take a thorough and critical look at the relevance of formal education certificates to work performance then one might come up with some very disturbing but useful insights. A study of Kenyan agricultural extension staff has found that formal education is actually associated with relatively poor work performance. This is attributed to the fact that the educated have high expectations about their own abilities and just rewards, and react unfavourably to a relatively lowly rural-based job requiring interaction with ordinary rural people. Those with lower educational qualifications had fewer expectations to frustrate, and actually worked better. It would not be totally surprising if something similar were found to apply among junior irrigation staff in Sri Lanka.

The fourth point is equally brief: that there exist few positive incentives to good work performance, especially in water management. Professional norms apply mainly to engineers. Otherwise, as was demonst-

rated above, neither promotion prospects nor 'in-service' examinations constitute major incentives to good work. Some of the main work incentives are negative in nature: adverse personal reports which might jeopardise otherwise near-automatic salary increments; the threat of transfer to another post, with all the inconvenience which that entails; or the very rigid application by superiors of rules about such matters as requests for leave, times of reporting for duty, etc. Faced with such a work environment it is rational for staff to concentrate on avoiding these negative sanctions. And the best way to do this is to avoid making detectable mistakes or inconveniencing one's colleagues or superiors.[20] A good strategy is to concentrate efforts on tasks where performance can be physically checked: e.g. constructing anicuts or repairing the wall of a canal once maintenance funds have been allocated. The other important strategy is to complete those tasks which, simply because they result in tangible constructions, are likely to be the subject of quantitative target accounting. This in particular applies to new construction. It is the non-fulfilment of programmes for new construction which is especially likely to attract the unwelcome attention of superiors and politicians.[21] The range staff of the Irrigation Department are responsible for new construction, maintenance and water management. The system of incentives tends to emphasise mainly new construction; maintenance work occupies an intermediate position, while water management work is very little rewarded.

The fifth point follows on closely. It is that the organisation of the irrigation bureaucracy strongly reflects its preoccupation with investigation, design and construction work, and in the process discriminates against the water management function. Most of the evidence has been given above. The main points may be briefly repeated:

1. Capacity or performance in water management is not sought or encouraged in the processes of selection, training, evaluation or promotion of staff. Ability and performance in investigation, design and construction are rewarded to some extent.

20. One way of inconveniencing superiors is by annoying farmers, perhaps by denying them water, and thus having them take their case to a politician, who is likely to take it up at the highest level of decision-making to which he has access, sometimes ministerial level.

21. It is possible that the Decentralised Budget, whereby allocations for new capital constructions (but not maintenance), are made at the district level, will exacerbate this trend by concentrating even more attention and resources on new construction, and correspondingly less on maintenance.

2. There is a strong correspondence between hierarchical rank, professional competence and lack of involvement in water management. For example, the promoted former technical assistants (professionally non-qualified engineers) who comprise 20% of the engineers cadre are sometimes considered a positive embarrassment and tend to be placed in those range posts involving most water management, not only because they are most suited to the job, but as a way of keeping them out of the mainstream of engineers' work.

3. There is no institutional provision for the promotion and development of a cadre of specialists in water management. The Water Management Division of the Irrigation Department has a purely advisory and research role, has only a handful of staff, and is under the authority of a Deputy Director whose main task is the supervision of four out of the fifteen ranges.

In the light of all these institutional disincentives to good water management the overall poor results from irrigation schemes appear less mystifying. However, the very paucity of serious attempts to manage water means that, given a serious effort, there are very substantial possibilities for boosting agricultural production and incomes. And our analysis suggests that there are feasible strategies for improving the performance of the irrigation bureaucracy in water management:

1. In staff recruitment, the partial replacement of academic achievement criteria with tests of job-related capabilities, especially perhaps applied numeracy and human relations ability.

2. A more flexible occupational hierarchy with greater scope for promotion. This is required in order to reduce the social gap between cadres and thus improve communications, and to recruit into the higher ranks a larger proportion of staff with substantial field experience and thus understanding of water management. This could entail both recruiting staff at an earlier stage in their education than is now the rule and providing opportunities for professional training while in service.

3. As a corollary of the previous point, but also something valuable in its own right, greater promotion and other rewards for good work performance at all staff levels.

4. The establishment of a distinct and separate career structure for those with expertise and ability in operations and maintenance work. This implies the eventual division of range posts into design and construction posts on the one hand and operation and maintenance posts on the other.[22]

5. Water management training programmes involving substantial periods of sustained fieldwork in which the officer is led, as far as possible, to see the irrigation system from the farmers' point of view.[23]

This is not the occasion to discuss suggested reforms in detail. It may however be noted that it is in no sense an 'all or nothing' situation. Each of the five approaches could be pursued gradully and delinked from reforms in other areas. Any effort in these directions is likely to be better than none.

The issues upon which attention has so far been concentrated are those where improved water management can be expected to result from institutional reforms operating *within* the irrigation bureaucracy. There is a further constraint on effective water management which merits discussion but needs to be treated separately because it is more centrally a matter of ideology than the others discussed above and because it relates mainly to relationships between the bureaucracy and the outside world, especially clients. In brief, the argument is that aspects of the prevalent ideology of public service discourage realistic and useful administrative innovation.

The issue may perhaps be encapsulated in the phrase: belief in the legitimacy of the organisation chart. That is to say, public officials in the irrigation bureaucracy (and elsewhere) are encouraged to believe that the authority relationship described in the organisation chart of their section of the public service is legitimate and optimal. Relationships which correspond to the lines and boxes of the chart meet approval and are to be admitted publicly; those which do not correspond to the chart are not to be exposed publicly. These relationships have two aspects: the vertical or hierarchical

22. The freeing of design and construction specialists from operations and maintenance tasks would be additionally very useful at the present time because of the great shortage of experienced civil engineers in Sri Lanka, a shortage made all the more acute by the acceleration of the Mahaweli Project. The time which Engineers in range posts currently spend in operations and maintenance could be used in design and construction, while promoted Techical Assistants could take over water management.

23. An example of such a programme is given by B. Badagion et al., "The Water Management Training Program of the Upper Pampanga River Project, National Irrigation Administration, Philippines", in International Rice Research Institute, op. cit.

aspect between superior and subordinate, and the horizontal or 'separateness' aspect of relationships between peers. The latter phrase refers to the fact that organisation charts typically permit only very limited contact, if any, between individuals or 'cells' on the same level. The implicit theory is that individuals or 'cells' (e. g. departments) on the same level have separate and defined areas of competence, that one shall not become involved in the work of the other and that communication between peers shall be mainly up through superiors and down again.

Now of course organisations do not in practise work as the organisation chart would seem to imply; neither could they. The organisation chart abstracts from almost all reality. In the first place, it takes no cognisance of the complexity of work. In the second place, it does not admit that the relationships in the organisation are social, and ultimately political relationships. Subordinates do not respond to the nominal sanctions of superiors in the way they are supposed to. The sanctions may either be inadequate or, what may amonut to the same thing, so drastic as to be impractical in many cases. Superiors may resort to a wide variety of 'unofficial' strategems to get work out of subordinates.[24] The relationship becomes one of implicit bargaining. Similarly, separate departments have to resort to 'scratching each other's back' in order to get assistance in completing their work or pursuing other goals. Anyone in the public service knows about this, and social scientists have built up a whole sub-discipline of organisation theory devoted to examining how organisations actually operate as social and political organisms. In its applied or practical role, organisation theory is transmuted into management theory: the art of channelling and building upon social and political relationships within organisations in such a way as to serve the interests of management.

It is not the author's intention to argue for any particular aspect of management theory. The point is that it is built on the commonplace observation which is almost wholly if only implicitly denied by those with authority over Sri Lanka's irrigation bureaucracy: that the way in which the public service actually operates is likely to be consistently and substantially at variance with the formal organisation. Once one is prepared to look at the question in this light it becomes possible to investigate how the service operates from a sociological and political point of view. The adoption of this approach in the case of the irrigation bureaucracy could lead to the following kinds of conclusions and institutional innovations:-

24. In the context of rural development in the Third World, an especially good piece of research on this subject is D. Leonard, op. cit.

1. It would become clear that the lower level staff have very little incentive to work well and that checks from above are not very effective. One might begin to experiment with 'payment by results systems', where 'results' could be equated to areas effectively irrigated, etc.

2. It could be seen that the relationship between farmers and irrigation staff is institutionally very difficult. That is to say, there is no mechanism by which implicit or formal performance bargains can be struck. If staff fail to deliver water, farmers have recourse only to the blunt and destructive weapons of (a) destroying control structures or (b) calling on politicians, whose response is unpredictable, and whose intervention saps further the morale of the irrigation staff. Correspondingly, if farmers destroy gates or do not perform maintenance work on canals, irrigation staff only have recourse to denying water or prosecution. These reactions are very ineffective, unpredicatable and may incur the wrath of politicians. If the problem is recognised as a lack of bargaining potential, then it seems much more important to pursue the strategy mentioned above: to promote farmers' groups able to trade off local level channel maintenance and water distribution against guaranteed supplies of water.[25]

3. It would become apparent that one reason for the ineffectiveness of the threat of prosecution of farmers for damage to irrigation infrastructure is that the authorities charged with prosecution – the police and the regular administration (Government Agents and Assistant Government Agents) – do not pursue cases actively because they have nothing to gain except unpopularity. It is one thing to assign these duties to a department; it is quite another to provide an incentive to perform them. If prosecution could be viewed as a bargaining counter in the kind of farmer – bureaucracy relationship mentioned above, then it would become apparent that it should be in the hands of the Irrigation Department, and that the Department should be staffed to exercise it effectively.

A more detailed analysis than that which the present author has been able to conduct may substantially modify these recommendations. The point of raising the issue here is mainly to point out the existence of two very different perspectives for examining an organisation – the formal and the sociological – and to suggest that the latter is much more informative and useful.

25. Among the issues over which the bureaucracy and farmers' organisations could usefully bargain is the question of the optimum timing of water supplies and thus of cultivation. The weight of opinion in the irrigation bureaucracy favours uniform timing schedules for all cultivators in each scheme. There are however many reasons why farmers should prefer 'staggered cultivation', a tract at a time (Chambers, *op. cit* pp. 37–40). Local bargaining could presumably produce a more informed decision than (widely-flouted) administrative fiat.

Conclusion

It is now a commonplace observation that the procedures and structure of the public service in Sri Lanka still strongly reflect the colonial legacy, and that this is oriented much more towards control (internally and in relation to the public) than to innovative and creative work of development.[26] This conflict is epitomised in water management: effective work requires a kind of responsiveness and local/lower level initiative and responsibility alien to the procedures of public administration. The paradox is however far less rooted than it might at first appear. It is not difficult to envisage changes in personnel policies and organisation which, even in the context of a bureaucratic public service, should substantially improve performance. It may be true that the inherent constraints of a public bureaucracy mean that it is unlikely that, for example, water use efficiencies on Sri Lanka's irrigation schemes will reach world records. But this is not what is required: relatively small improvements in water management can yield a very large pay-off. A relatively simple sociological analysis of the work situation of the irrigation bureaucracy makes a great deal seem possible.

26. This issue is discussed in detail in W. A. Wiswa Warnapala, 1974, *Civil Service Administration in Ceylon*, Department of Cultural Affairs, Colombo.

BOOK REVIEW

TISSA FERNANDO and ROBERT N. KEARNEY (Editors)

Modern Sri Lanka: A Society in Transition

Syracuse University Press, 1979, viii, 297 p.

In their preface to the book the editors reveal that they had two main objectives. In their own words, the book was in the first place ".... intended to be meaningful and interesting to students and others obtaining their first introduction to Sri Lanka." Secondly it was ".... at the same time to make fresh contributions to scholarship...." To ensure that this latter objective was attained, each chapter of the book was assigned to a specialist in that field. Of the eleven scholars who eventually collaborated in the work, four were Americans. Five others were Sri Lankans currently based on the North American continent and only two of the contributors were Sri Lankans who had remained behind to work in their own country, incidentally a significant indicator of the impact of the 'brain drain' on modern Sri Lanka.

The book which has resulted is a welcome addition to the growing number of works on the contemporary Sri Lankan scene. On reading the preface one does get the impression that the editors have set both themselves and their contributors too ambitious a target. It is difficult enough to write in twenty or thirty pages a lucid and accurate summary of the main developments in any area of activity in modern Sri Lanka. To request the writers to also make fresh contributions to scholarship at the same time is to make their task well nigh insurmountable. It is a reflection on the ability and ingenuity of many of the contributors that they have actually achieved this.

A good example of such a successful endeavour is Swarna Jayaweera's chapter on 'Education' (pp 131–154). After lucidly analysing the main characteristics of the colonial system of education inherited by independent Sri Lanka in 1948, she details the expansion of education facilities in the last thirty years and follows this up with a critical survey of the current educational structure. She concludes this succinct account with an able analysis of current problems in education including early school-leaving, regional imbalances and unemployment among the educated youth. A number of useful statistical tables supplements the chapter very usefully.

Another instance is perhaps C. H. S. Jayawardene's chapter on Demography (pp 43–56) which is perhaps the best brief survey on the subject published anywhere but here the text could have been strengthened by a few appendices of statistics. Then again Siri Gunasinghe's survey on the Art and Architecture of the island (pp 226–263) can be read by both beginner and scholar with profit. Ranjini Obeysekere's survey of the development of Sinhalese literature (pp 264–285) is a well-written chapter full of insights and finally Kearney (pp 57–81) provides an excellent survey of Sri Lankan politics.

On the other hand there are chapters that have achieved only one of the two objectives. A good instance is Gananath Obeysekere's chapter on Popular Religion (pp 201–225) which would have found a place in any scholarly journal and does break fresh ground. It is, however, somewhat hard going for a person looking for his first introduction to Sri Lanka. On the other hand Tissa Fernando's chapter on Social Stratification (pp 29–42) skims the surface too lightly which seems a pity in view of his recognised expertise on the subject. Somewhat closer to the ideal are chapters by Ross Caster (pp 180–200) and Geraldine Gamburd (pp 155–164) which try to give a 'feel' of life and belief in Sinhalese and Buddhist society.

The book can be also criticised for some amount of imbalance. Apart from some specific mention by Kearney and in the introductory chapter the Tamil community in Sri Lanka (some 20% of the population) and the Muslims (some 7% of the population) tend to be almost completely ignored while Sinhalese society, literature and religion get much more generous attention in the form of specific studies in chapters V (pp 83-99), VIII (pp 155-164), X (pp 180–200), XI (pp 201-225) and XIII (pp 264–285). Another imbalance that can be cited is the emphasis on society and religion at the expense of politics and the economy. The last two areas receive a mere 55 pages out of the total book. Balakrishnan does provide a workmanlike survey of the economy (pp 101–130) and Kearney's chapter, mentioned above is well worth a second reading but some material in these two chapters is now unfortunately outdated by the constitutional changes of 1978 and the reforms in the economy in 1977-79. Nevertheless the concentration on social and religious themes might not be altogether undesirable for it enables this work to gain an edge, in this sphere over the only other book of its kind, the more substantial, *Sri Lanka: A Survey* edited by K. M. de Silva and published by C. Hurst, London 1977, 496 p.

In sum, despite a few shortcomings *Modern Sri Lanka* is a book which can be recommended as a worthwhile investment for all libraries and scholars interested in Sri Lanka. Each chapter is usefully supplemented by select reading lists. On the whole errors are few. The University of Ceylon was established in 1942 and not in 1944. Geraldine Gamburd must surely be misinformed when she states that a Sinhalese villager's *hatmuthu paramparawa* (literally: seven generations of ancestors) can change with the family he or she marries into and goes into residence with. Modern scholars would also disagree with her definition of *variga* as a family name. Despite such problems the overwhelming reaction is one of gratitude to the editors and to Syracuse University for having produced and published a valuable addition to the literature on contemporary Sri Lanka.

C. R. de Silva

University of Peradeniya,

Sri Lanka Journal of Social Sciences

INSTRUCTIONS TO CONTRIBUTORS

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The Social Science Research Centre (Sri Lanka)

The Science Research Centre was set up in May 1977 under the National Science Council of Sri Lanka. Its main objective is to promote research in the social sciences in relation to Sri Lanka's national requirements. It fulfils a long felt need for an official agency at the national level to undertake, sponsor, organise, coordinate and direct research in the field of social sciences. Sri Lanka has had very few institutions for social science research, and those that exist do not adequately fulfil the research needs in the entire field of social sciences. Many of them specialise in certain areas to the exclusion of others.

The Centre is administered by the Statutory Working Committee on Social Science Research which has been set up under section 19 of the National Science Council of Sri Lanka Law No: 36 of 1975. The Social Science Research Centre has been the main implementing arm of the Statutory Working Committee on Social Science Research. The latter hopes to achieve most of its objectives through the Research Centre.

Among these objectives would be the identification of priority areas for research in soical science in accordance with national needs; the promotion of research at the postgraduate level; and coordination of research activity in these areas within the country. The Centre will also provide social scientists with a continuing forum to meet and discuss their research interests and problems.

Social science research and studies in Sri Lanka need considerable encouragement by giving it due recognition and financial support. Moreover, there must also be facilities to disseminate this research and to get some sort of recognition from the government and policy makers. An urgent and immediate task is to create a research environment within which potential researchers could be stimulated to work. It is hoped that in the course of time the Centre will help to overcome these shortcomings.

CONTRIBUTORS TO THIS ISSUE

HOWARD WRIGGINS, B.A. (Dartmouth), M.A. Ph.D. (Yale)
Ambassador for the United States of America in Sri Lanka.

SWARNA JAYAWEERA, B.A. (Hons.), M.A. Ph.D. (Lond.)
Professor of Social Science Education, University of Colombo.

G. L. PEIRIS, LL. B. (Ceylon), D. Phil (Oxford), Ph.D. (Sri Lanka)
Professor and Head of the Department of Law, University of Colombo.

C. M. MADDUMA BANDARA, B.A. (Ceylon), Ph.D. (Cantab)
Senior Lecturer in Geography, University of Peradeniya.

M. P. MOORE, M.A. (Oxford)
Research Fellow, Institute of Development Studies, Sussex.

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