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FACULTY OF COMMERCE AND ADMINISTRATION

A RESEARCH PAPER

FOR THE DEGREE OF

MASTER OF PUBLIC POLICY

COMMISSION FOR THE FUTURE:
RESPONSE TO CHANGE

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ABSTRACT

This paper examines the links between social change, Kuhn's concept of the paradigm, future studies and the task of the Commission for the Future, CFF. The CFF is identified as being a constructor of social reality for its clients – through its espoused approach to change. Developments and methodology from a number of disciplines (primarily future studies and technological forecasting, history, organisation theory, political science, and sociology) are utilized.

The central proposition is that change in society derives from a shift in the dominant paradigm and its interpretations in human relations and activities. The minimal impact of the CFF is ascribed mainly to the nature of the approach to change adopted by the CFF. This approach, consistent with the societal paradigm in certain contexts, is not appropriate for the CFF and acts to disguise the nature of the task and implications of CFF activities.

A number of alternatives are offered for the CFF. The ability of CFF publications to fascinate, and explore alternatives usable by the target groups are factors vital to the success and value of the CFF.

RESEARCH PAPER - COMMISSION FOR THE FUTURE: RESPONSE TO CHANGE

PART 1

DEFINING THE FUTURE

The concept of time is the index by which future, present and past
are defined. Although past, present and future are conceived as a
continuous process in time, these three states are in a sense
subjective. Histories may be rewritten, selective perception
reshapes events - past, present, future and the concept of time may
alter through cultural and scientific constructs.[1] The social order-
ing of time regulates past and present and establishes a future with
expectations, needs and implicitly the requirement to plan.

The centrality of the concept of the future in individuals and the
community is evident from the range and variety of organisations
and roles that have been or are involved in predicting and influenc-
ing the future, or perceptions of it. For example, religious lead-
ers, prophets, mediums, oracles, astrologers, political leaders and
more recently planners, forecasters, futurologists and multi-
disciplinary study groups and organisations peddle their future
wares. The current view of the future, particularly in developed
western nations is relatively recent and derives from the complex
of concepts, beliefs and values that collectively define the
paradigm[2] that underpins society. Other societies both past and
present do not share the western view of time and its states. For
some societies the future was almost a direct continuation of the
past or, with the belief in life-after-death the future was a return
to the past in which individuals were reunited with those who had
passed on. Some eastern societies such as those pervaded by
Hinduism, Buddhism or Yoga perceive change over time in terms of
recurring cycles of birth, death and rebirth or as a circular process
with a return to a heavenly state. The western view of a linear
future embodies within it the idea of progress both material and

metaphysical. Although the origins of this view of the future are obscure with influences from Greek mythology and mid-eastern prophetic traditions the Renaissance and the Reformation accelerated the acceptance of the concept of progress. The Renaissance marked the onset of the application of the scientific method (a process of observation, measurement, experimentation and induction) to natural processes so that predictions and their verification became possible. The Reformation through the pervasion of the Protestant work ethic and related values supported the growth of trading enterprises, capital and the deferment of immediate rewards for future gain (McHale, 1978). As material progress and social betterment became more evident with the industrial expansion of the nineteenth century expectations for the future were characterised by material optimism. Waves of social, economic and political change and the continued growth of industrial society ushered in the twentieth century. The material optimism has however diminished in recent years as the extent of the concomitant effects of progress such as widespread pollution and anomie have become apparent. The quest for social and material or economic progress are no longer perceived as being complementary.

> Marx and Freud emphasized, in their separate ways, the
> new found future plasticity of the human condition. The
> former sought the levers for future change in evolutionary
> historical laws leading to revolution; the latter located
> them internally - by 'reliving' his past in the present
> the individual could find future freedom (McHale, 1978, 6).

The accelerating rate of change has become more visible this century and more particularly since the world war of 1939-45. The under-lying pattern of change has altered not only through the rate of change but also in the quality and extent of change. Many of the effects of change are detailed in Toffler (1970), for example, cultural lag ('generation gap'), transience, novelty, speed of communications, both scarcity and abundance of time, life cycle changes (prolonged adolescence, extended retirement) and 'a new sensitive awareness of the role it plays in the present' (Toffler 1970; 14). Of particular importance to the CFF is the compression of the time period between the occurrence of a problem or issue, its publicising through the media and the demands on government and government agencies to resolve the issue. In New Zealand this decrement has become progressively more evident in recent years in such diverse areas as fishing zones, transport options, energy supplies and communication technology. The public and their representatives have become increasingly aware of the urgency and imminence of the future and the uncertainty it contains. Unexpected externalities such as threats of war, terrorism, refugee crises, instabilities in trade and overseas markets, oil supply and cost difficulties and, inter-nally, migration problems, violence, alienation of sectors of society, economic instabilities, education and welfare crises are now everyday events. Pressures such as these have created a new awareness which has generated a change in the set of ideas and values which coalesce in the New Zealand paradigm. It was out of this uncertainty, confusion and anxiety that the need for measures such as the CFF[3]* and the NZPC** emerged. As such the CFF must be, to many New Zealanders, a hedge against uncertainty, another thread in the welfare blanket that warms and protects New Zealanders in need. But now the threat to the New Zealand way of life is the

*Commission for the Future   **New Zealand Planning Council

future - can it be guarded against by the traditional response, another government agency? How can the CFF cushion the impact of the future?

PART 2

CONSIDERATION BY PARLIAMENT

The establishment by an Act of Parliament of the Commission for the Future, generated the opportunity for members of parliament to consider and debate the value, philosophy functions, objectives, directions and resources for the CFF. The New Zealand Planning Bill was introduced and read a first time on 19 August 1977. The Bill was drafted to:

> make better provision for national planning in
> New Zealand by establishing a New Zealand
> Planning Council and a Commission for the
> Future (New Zealand Planning Act 1977).

In the first reading the CFF was supported in principle by the Opposition. The second reading on 8 November 1977 involved twelve speakers, six each from the National Government and the Labour Opposition. The Bill passed through the committee stages on 10 November 1977, and read a third time on 29 November 1977.

The Minister of National Development (Hon G F Gair) in opening the debate on the second reading stated the Bill gave statutory foundation to the CFF and was in fulfilment of a promise in the 1975 National Party manifesto and,

> The organisation [CFF] had been set up to provide
> the Government and the public with an early
> warning of the major issues likely to arise in the
> future as a result of long-term changes in the

social, technological and economic environment in
which New Zealand's development will take place.
The commission is to give special attention to the
implications of new and prospective developments in
science and technology .... The commission will be
concerned with identifying issues rather than
resolving them ....

The minister goes on to state that the CFF will concern itself
with a longer time span than the New Zealand Planning Council
(NZPC) and that special emphasis is to be placed on ensuring
that members of Parliament are informed on future issues
identified by the commission. Membership of the CFF is not
more that seven persons appointed by the Governor-General
or the recommendation of the Minister, together with a
Minister of the Crown, a member of the Opposition, a member
of the NZPC and the Director-General of the Department of
Scientific and Industrial Research.

The main thrust of the Opposition in debating the Bill was
at the appointment of the Minister of National Development
to the NZPC and the apparent political bias in appointments
to the council. The CFF was in general supported because of
its bipartisan composition, possibly because of its lack of
immediate political relevance and as Mr Prebble commented,
Planning is like apple pie. It is hard to find
anyone against it, ...

Appendix 2 contains a resume of references to the CFF from the
second reading debate. These references may be grouped under
three main headings.

1   Philosophy of future studies and change in society.

2   Functions and objectives of the CFF.

3   Directions   , alternatives or options available to
     New Zealand in specific areas of concern.

The categorisation of statements made in the context of a
political debate is, to a considerable degree, arbitary.
However the expressed concerns and expectations for the
CFF need to be identified as these are likely to shape the
focus and range of activities of the commission in its
formative years. The justification for these three
categories is that they are fundamental in determining
the mission of the CFF and in its-realisation. Questions
of philosophy determine the task, nature and structure
of the CFF, functions and objectives the priorities, terms
of reference and resources while directions and alternatives
the areas of study.

The main questions of philosophy which surfaced in the second
reading debate are listed below:

1   The CFF will be bipartisan.

2   Need to change the present to fit the desired future,
     not push the past forward.

3   Maximise New Zealand's options yet maintain flexibility.

4   Future studies requires both rational and extra-rational
     thought processes.[4]

5   Planning cannot be isolated from the decision makers
     (Government) or the community, is not inconsistent with
     democracy, and requires externally determined goals and
     objectives.

6 Planning may have wider implications in scientific, political, cultural and social spheres outside its specific framework.

7 Issues and their options presented impartially are required, not blueprints or solutions.

8 The time scale 5 to 25 or 30 years supposedly removes the CFF from political controversy.

9 Is the CFF consistent with a pluralist society?

10 Is the CFF a device to distract attention from current difficulties?

The CFF is presented as a bipartisan body (but minor political parties are not represented) identifying emergent issues, presenting unbiased alternatives based on both extrapolation and intuition without immediate political implications in part because of the remoteness of the time frame. Solutions are not offered only options. Its purpose is not to plan, per se, but its efforts are potential input to plans yet to be formulated.

Points 9 and 10 indicate the difficulties inherent in the attempt to achieve a non-political CFF.

Functions and objectives of the CFF identified in the second reading debate.

1 The paramount function is to study the possibilities of the long term economic and social development of New Zealand. (Minister of National Development)

2 Make possibilities available to members of Parliament.

3 Publish for wider dissemination.

4   Ensure a sound basis for long term policy is arrived
    at by a process of wide consultation.

5   Increase general awareness and understanding of the
    key issues related to New Zealand's development.

6   Ensure that long term considerations are brought to
    bear on policy decisions throughout the Government
    and the community.
    (Points 4, 5 and 6 are the official objectives as
    stated by the minister).

7   Concentrate the limited resources of the CFF on
    selected issues rather than 'try to cover every aspect
    of New Zealands way of life'. (Hon R O Douglas)

8   Be the 'forward intelligence section' of the NZPC.

9   Do not project answers to problems the government
    or parliament does not know about.

10 Bring the government/parliament/country's thinking
    into the twentieth century.

Many of these functions and objectives are noble and likely
to be supported and considered most desirable by the majority
of New Zealanders. The objectives are sufficiently general
to allow almost complete discretion for the CFF in determining
its priorities and areas of study. Unfortunately and
inevitably there are contradictions and inconsistencies in
these functions and objectives which may lead the CFF into
public controversy if is successful in persuing, for example
the official objectives. National Development (a 'fast track'
for preferred projects) and petrol usage restraints (carless
days versus rationing) are the types of issues an aware CFF may
anticipate, publicise, polarise opinion and constrain or inhibit
future government action.

The following specific areas of concern were identified as areas which may benefit from study by the CFF.

1   Trade options

2   Possible advances in medicine

3   Energy options

4   Agricultural options

5   Advances in information processing systems

6   Transport options

7   Business /work/industrial relations options

8   Leisure activities

9   Urban development options

10   Social welfare options

11   Planning options; free or controlled market place, national or regional priorities, economic or social priorities, advantages/disadvantages of planning.

Many of these areas of concern are indicative of the general concerns of government. Any one of the areas has the potential to utilize the full resources of the CFF for an extended period and still leave many options unexplored. Some 5 months prior to the second reading debate the CFF published a report (CFF 1/77, July 1977) which contained, among other material 'suggested areas of interest and possible projects' for the commission. This report in part pre-empted the consideration of areas of study for the CFF and may well have been used as a source document by members of parliament as a number of specific areas of concern appear both in the report and the debate.

PREDILECTIONS

Human consciousness of the past prevented history from repeating itself (Carr 1951; 6).

It is through the past and the values of the present that the future is predicted, prophecised, anticipated or interpreted.

> Modern man peers eagerly back into the twilight out of
> which he has come in the hope that its faint beams
> will illuminate the obscurity into which he is going;
> and conversely, his aspirations and anxieties about
> the path that lies ahead quicken his insight into what
> lies behind. (Carr 1961; 129)

The use of the present is, in future studies, a matter of convenience as it has only a notional meaning as an ephemeral boundary between past and future. Its utility however is in providing a datum point for the recognition of the selective perception of the forecaster.

History and future studies are reflexive in that they start in the present with the values and beliefs of the present and through these filters the past or future is interpreted. It is through an understanding of past events, the factors and situational constraints identified with their occurrence, that a conceptual scheme is developed as a guide to the anticipation of future events and as a basis for evaluating predictions. Unless there is acceptable justification for predicting a clear break between past and future, forecasts are, in the

main, based on the extention of existing social phenomena.
This linking of past and future does not presume that history
will repeat itself. The probability that the situational
factors and actors intentions and resources will be
duplicated is infintesinal. If, for no other reason
awareness of the past will introduce an 'experimenter effect'
to prevent a recurrence of the some chain of causation.

Although a degree of subjectivity is accepted in the interpretation
of history the 'facts of history' form a basis for forecasts.
Facts of history are facts which historians have selected
to interpret history.

> ... the historian is engaged on a continuous process
> of moulding his facts to his interpretation and his
> interpretation to his facts. It is impossible to
> assign primacy to one over the other. (Carr
> 1961; 24)

Interwoven with interpretation is causation. Implied causes
determine the interpretation of the historical process and
interpretation determines the selection and presentation
of the causes. However causes may be implied at different levels
of generality so the appropriate level is selected
to provide a conclusion which may serve as a guide to action.
Other sequences of cause and effect, although possible
particularly those ascribing accidental causes or irrational
explanations must be rejected as irrelevant. For example in
an analysis of the Cuban missile crisis of 1962, Allison (1971)

offers three levels of explanation for the decision process.
The first conceptual model entitled 'Rational Actor' or
'Classical' model treats national governments as if they were
"centrally co-ordinated, purposive individuals" (Allison 1971,
3). The intention is,

> to show how the nation or government could have
> chosen to act as it did, given the strategic problems
> it faced ... Predictions about what a nation will do
> or would have done are generated by calculating the
> rational thing to do in a certain circumstance,
> given specific objectives. (Allison 1971; 5)

The second level of explanation utilizes an 'Organisational
Process Model' which focuses on 'outputs' from large organisations
with relatively stable patterns of behaviour.

> Predictions identify trends that reflect established
> organisations and their fixed procedures and
> programmes. (Allison 1971; 6)

The third level focuses on the politics of a government so
that events are explained as a,

> resultant of various bargaining games among players ...
> who did what to whom that yielded the action in
> question. Predictions are generated by identifying
> the game in which an issue will arise, the relevant
> players, and their relative power and skill. (Allison 1971;

6-7)

This third set of explanations offers causes which frequently
appear accidental, for example, the particular wording of a
cable, personal preferences, prestige of actors, state
of mind , misperceptions and/or misunderstanding, time
constraints, agglomerations of relatively independent
decisions, which as such cannot be generalized as they are
unique and teach no lessons nor lead to conclusions.
Explanations at the first and second levels of generality have
relevance for future studies the third mainly a warning to the
limitations of models of reality.

Historical facts, presuppose a degree of interpretation which
implies a set of value judgements. It is these value judgements
which have two major implications for future studies. The
first determines the measures by which history is defined. The
context (economic, democratic, socialist, cultural, anthro-
pological , etc) determines the criteria, model or theoretical
construct which is applied. The second implication is the
relativistic nature of measures of 'good' of 'bad' by which
societies are judged.

> The process by which specific historical content is given
> to abstract moral concepts is a historial process;
> indeed, our moral judgements are made within a conceptual
> framework which is itself the creation of history.
> (Carr 1961; 76)

Such universal and abstract criteria as democracy, freedom, equality, liberty, justice or natural law may vary both in time and geographically so that their practical application can be understood and compared only in historical terms. In periods of radical change (such as the present) there are invariably extreme human costs; suffering, coercion and exploitation, which are rarely borne by those that benefit from progress.

> History is about the most cruel of all goddesses
> and she leads her triumphal car over heaps of corpses,
> not only in war, but also in 'peaceful' economic
> development. And we men and women are unfortunately
> so stupid that we never pluck up courage for real
> progress unless urged to it by sufferings that seem
> almost out of proportion. (Engels, 1893)

The values of the forecaster are most relevant to utopia writing because the view of the future is a reflection of the present. Utopias as presented may fail to link the present and the future so that the human suffering endured by segments of society is ignored in the interest of the 'greater good'. Or, paradoxically draconion measures are required for a 'short' time so that greater freedom etc will eventuate.

> Popper (1945) and others have pointed out the tendency
> towards despotism in all utopias. The dreamer is so
> anxious to impose the good society on mankind that he
> commands it to be done (Encel et al 1975; 15)

PART 4

ANTICIPATION

The search for the true shape of things-to-come is an obsession
which has gripped many western countries since the 1950's. The
forecasts of professional horizon-watchers of the last two
decades are the most recent stage in the evolution of the
literature of expectation. Although there were a number of
mainly hesitant, clumsy presentations of futuristic fiction
prior to L'An 2440 by Sebastian Mercier in the 1770's this
publication marked the beginning of the modern style. (Clarke
1979).

> The eleven editions of L'An 2440 between 1771 and 1793, the
> four English translations, the two American editions,
> the Dutch and German translations, the many initiations
> - all these show that the Mercier scheme coincided with
> contemporary ideas about the most desirable social
> system. The opening scenes reveal an austere and simple
> way of life. There are sumptuary laws against ostentatious
> living,... Education is the concern of the state;...
> The citizens are all deists in religion;... careful of
> the sick and old,... and make voluntary contributions
> to the national exchequer. This perfect social scheme
> is part of a greater world order, for peace and amity
> prevail,... All the injustices of the past have gone:
> imprisonment without trial, religious persecution,
> distinction between classes. (Clarke 1979; 27)

The prescription for a future utopia has changed little in
200 years. Mercier's vision linked the resources of technology
to reason and virtue to realise his utopia. He reports regular

maritime communications between all nations, canals from the Nile to the Arabian Gulf, from the North Sea to the Mediterranean and 'all sorts of machines for the relief of men in laborious works, and capable of much more force than those in our times'. Although Mercier had faith in science and technology he failed to discern the true shape of hoped-for improvements (Clarke, 1979; 15-34).

By the early nineteenth century the various forms of futuristic fiction were developed: imaginary wars, political prophecies, ideal states, science fiction, the Last Man. Concern over contemporary events and possibilities were frequently reflected in the futuristic fiction. Anticipatory presentations often began with known facts and real possibilities in the contemporary situation. By projecting these in an apparently realistic manner into the immediate future an image of disaster, ruin, distruction and social chaos or subjugation was described as the obvious consequence of the contemporary situation. Clarke (1979; 40) identified from these alarming visions, two primary laws that control the pattern of future fiction,

> First, and from the start, one of the most frequent
> themes has been the future not of individual nations
> but of all human beings and of the entire world. Second,
> there has always been a decided novelty about many of
> these projections, since writers find the substance of
> their hopes or fears in the most recent inventions
> and social changes.

The concept of the Last Man arising in an age when the sciences were ending the domination of man by nature was an afirmation of the bond between man and nature. The theme has endured over time, and has been further publicised through the cinema with productions such as Dr Strangelove (1963) and The War Game (1966). A complementary theme is widespread destruction through the evils of technology and related materialistic and hedonistic values, ritualistic cleansing and a subsequent re-birth of a 'good' society by the selected survivors. This theme was explored more than once in the Old Testament, has been the basis for numerous science fiction stories (two of the best known are A Canticle for Leibowitz [5] by Millar, 1959 and The Dispossessed by Le Guin, 1974) and in television drama (The Survivors, 1976). It was the traumatic experience of the First World War and the many sometimes frightening technological advances spawned by the concerted war efforts that generated profound change in futuristic literature. An immediate affect was a divergence between prophets and forecasters. The prophets rejected the belief in progress that more technology, more organisation, more wealth must lead to a better society. The forecasters limited themselves to identification and extrapolation of limited patterns of development. The reinforcement of the horrors of war with the second generation of destructive technology, inhuman tyrannies, systematic destruction of ethnic groups in the Second World War and the continuation in Indo-China and the Middle East producted the statements of personal values referred to above (Millar, Le Guin) which in the face of collective indifference are also characteristic of current existentialist philosophy. Le Guin (1974) presented the trad-itional utopian themes; self versus community, poverty versus

wealth, socialism versus capitalism, freedom versus subjugation, in the setting of two sister worlds, Anarres an idealist anarchy and Urras an 'authoritarian hell planet'. Her contribution to utopian literature was to direct attention to the dilemmas in the classic systems of the ideal state (Clarke, 1979; 288).

In contrast, the despair and decay in the distopia Nineteen Eight-Four (Orwell, 1949) has become almost a forecast rather than a warning for its times. The scientific and technological developments required for 1984 where technology is applied to rigidly control all citizens, are either already available or are likely in the near future. Many of the social and political tendencies of the last three decades have been in the direction envisaged by Orwell. A list of 137 specific predictions in 1984 divided into two categories -

    i   scientific and technological predictions

    ii   social and political predictions

have been identified by Goodman (1978). In 1978 Goodman claims 'over 100 of the predictions had come true' and that '1984 describes a future that is clearly possible'. Of the predictions which have been realised, some which are clearly evident in New Zealand include, 'doublethink' (denial of objective reality by the use of ideological filters or abstractions to subvert reality), 'Newspeak' (Under Secretary for Immigration redefines refugee camps as 'places of first refuge', information leaflet July 1979), forced metrification, the merging of gender identities, past statements by government dismissed as 'inoperative', 'Big Brother' (television personalities especially newsreaders and

current affairs frontmen are often successful because they have this same kind of face), breakup of the family, unwarranted search and surveillance. The willingness of New Zealanders to give up rights and freedoms (unlawful assembly law, search of airline passengers, driving offences 'blitz', industrial legislation penal clauses, drug offences legislation, petty local body acts, etc) may allow the creation of a totalitarian state through a relatively minor 'triggering incident'. As the CFF is charged with identifying long term social change a function of the CFF must be to identify triggering incidents and present the implications of these social trends. Unfortunately Goodman has little faith in government agencies.

> ...we should not expect answers from government
> bureaucracies ... Being organisations that act to define
> society's status quo, bureaucracies are far two inertia-
> bound [or controlled] to discover innovative solutions
> to the potential threat of totalitarianism. (Goodman
> 1978; 355)

One way of publicising a situation such as the drift towards totalitarianism, is to present a plausible scenario along the lines of Chesney's Battle of Dorking[6] which at the time created a 'political sensation' (Clarke, 1970), was attacked by the English Prime Minister Gladstone as being alarmist and implausible, generated a wide ranging debate and resulted in some changes to defence practice. However Chesney was not a confidential adviser to the government of the day as is the CFF. When the BBC commissioned film, The War Game was completed in 1966 and screened for senior programme staff of the BBC it was banned

because,

> it had the power to produce unpredictable emotions and
> moral difficulties whose resolution called for balance
> and judgement of the highest order. (BBC statement,
> 1966)

Would the same type of elistist statement embargo the publication
of a plausible scenario of totalitarianism in New Zealand by
the CFF? Possibly it will be deemed appropriate to limit CFF
activities to 'safe' scenarios and forecasts?

FORECASTS

Forecasts may be of the 'most likely future' category (usually less than 5 years ahead), cover a range of options or alternatives, or present utopias (or distopias) to stimulate throught, controversy or desired action. The time span for the CFF, 5 to 30 years, relates mainly to the second and third applications.

Although the CFF may not necessarily make forecasts or predictions to discharge its paramount function - studying the possibilities of the long term economic and social development of New Zealand - it will certainly use them in considering possibilities. Forecasts are usually based on a set of simplifying assumptions, a model or theoretical construct and a data set which is input to the model. The data set frequently contains historical information, both qualitative and quantitative, on parameters interpreted through the model. There are constraints and issues which arise in the choice of assumptions, models and data which have implications for the potential accuracy, application, effectiveness and validity of specific forecasts.

One of the major difficulties with forecasting social events is to take account of the policy implications of the forecasts.[7] For example, a prediction of an overcapacity in electricity generation can be thwarted by counter policy measures. The predicted social event or situation is usually subject to policy decisions and manipulation within the timespan of the forecasts. And, the policy initiatives may well have been as a direct result of the forecast which now becomes a self-defeating prophesy. The CFF has as one of its three main objectives to 'ensure long-term considerations are brought to bear on policy decisions' so that

an appreciation of the interaction between immediate policy decisions and long term goals through forecasts and scenarios is required.[7]

A variety of taxonomies has been developed to categorize forecasting techniques. For example de Hoghton et al (1971) places techniques on a continuum based on the degree of numeracy. Edwards (1969) offers ten distinct methods (prophecy, chance, intuition, analogy, correlation, projection, simulation and gaming, invention, elimination, and dialectic) and Jantsch (1967) identifies over 100 distinguishable techniques or elements of techniques which are grouped into four types, intuitive, exploratory, normative and feedback. The Jantsch taxonomy as applied to identified techniques and a summary of the advantages and disadvantages of techniques relevant to government science policy appear in appendix 3.

Jantsch (1967; 112) discusses three limitations which are characteristic of all forecasting techniques:

1   techniques are sensitive to current knowledge, technical
     and value judgements, synthesis and the 'capacity for
     imaginative thinking',

2   are partial techniques which do not consider the complex
     interactions in social policy,

3   are auxiliary aids to decision making, which require a
     broader information base than supplied by any one
     forecasting technique.

Intuitive techniques have in part been discussed already, (Utopias, science fiction) but the accepted form is the Delphi technique. The Delphi technique is based on the assumption that,

> useful forecasts lie hidden away in the collective
> unconscious of a group of people knowledgeable in
> the area of interest. The object of the technique
> is to extract this forecast with minimal
> contamination from social pressures.
> (Encel et al 1975; 78)

However there is scepticism of this and related techniques (Jantsch 1967; 133-141, Encel et al 1975; 78-83). Forecasts have in general been too conservative, the Delphi technique is little more than a social survey, and Delphi maintains the illusion that the future can be reliably forecast.

Exploratory techniques include; scenarios, statistical and economic models, learning curves, etc, but the main defining characteristic is the extrapolation of time series or trend analysis. It is probably the most frequently applied forecasting technique and has widespread application in population and school enrolment projections (McGill, 1979), in projecting demand for raw materials (Kahn and Wiener, 1967), economic and defence projections and technological forecasting (Jantsch 1967).

Trend extrapolation naively assumes a mathematical function that relates selected parameter values to an index variable, usually time, over an observed period will continue to hold true for the future. However, despite the naive assumption

of continuity between past and future, extrapolations are useful
in that they may indicate upper and lower bounds or a baseline
for the forecast value. Jantsch (1967; 157-160) discusses
four classes of trend curves which, once the underlying process
or sequence of precursive events are know, allows the limitations
and rates of innovation to be estimated with 'reasonable'
accuracy.

> at the same time trend extrapolation strengthens
>
> the mechanism of 'self-fulfilling prophecy' by
>
> increasing confidence in the reasonable attainment
>
> of a goal which otherwise could not be
>
> analytically assessed. (Jantsch 1967; 159)

Extrapolations may not take account of critical determinants in
future time. If the process being forecast is in a sense large or
relatively free from perturbations the likelihood of a successful
forecast is enhanced. For example national primary school
enrolment projections have on average been within $\pm$ 0.5% after
one year and $\pm$ 3% after ten years from actual enrolments
(McGill 1979; 14) whereas for small primary schools this level
of accuracy could not be achieved with the same methodology.
Encel et al (1975; 76-77) cites the examples of extrapolation of
population size based on birth, death and migration statistics
and one based on aggregate population size that will almost
certainly generate significantly different projections.

The distinction is not just between alternative approaches but
is more fundamental as Bertalanffy (1969) has indicated by observing
that structures are slow processes of long duration while
functions are fast processes of short duration. Extrapolations

by assuming a continuation of past trends are inherently conservative and implicitly assume a continuation of existing social institutions and structures.

Normative techniques encompass relevance trees, networks, systems analysis, operations research, decision theory, computer models, etc, which are of most value in a relatively closed society, programme, or sphere of activity and are usually applied to optimise resource utilisation and achieve specified goals or needs.

Computer models are seen as pertinent to the application of complex models (dynamic, non linear, multi-dimensional with interactions) for socio-technical systems and social forecasting. One of the benefits of formal modelling is claimed to be a clarification of issues and objectives (Forrester, 1968) but as Maestre and Pavitt (1972, 16) in the context of government policy point out it is often because objectives are open to interpretation that a compromise and consequently an agreed policy is possible. The output from computer models is invariably below expectations.

> In practice, it has often been the case that
> social issues examined using large scale modelling
> methods ... have been unable to contribute greatly
> and sophisticated methods seem sometimes to have
> added to the confusion ... large scale 'general
> purpose' models ... have led to models which are
> both too simplistic and unmanageable.
> (Encel et al; 1975; 112)

Although computer models may have been oversold the application
of normative techniques, many of which emphasis alternatives,
offset some of the limitations of extrapolations. In place
of a question of the nature 'What will the be the required
recuitment level for teachers in 1984?' which is usually answered by
extrapolation of trends, a set of alternative questions may
prove of more value. For example, questions concerning the
conditions under which different recruitment levels arise ,
teacher attrition rates, expanding or declining student
population, staffing regimes, size of schools, etc, exemplify
the conditional nature of the forecast and de-emphasise the
use of forecasts as 'predicting the future'.

Feedback techniques are the ultimate goal of most forecasts and
combine elements from both exploratory and normative forecasting.
The main feature of feedback loops between the forecasts
(possible futures) and the needs, developments or parameters
which are input to the forecast is to develop planning for an
actual future. The feedback may be between the desired and
anticipated outcome of a social trend or technological development
or between time stages (present, 5, 10 years ahead, far future)
in a scenario. The concept is shown in a schematic form in
appendix 3.   The outcome of feedback is a process by which
the perceived future becomes an operational device to effect
change in the present and through such changes create a desired
future. A major difficulty in the use of feedback is to move
outside the present set of 'values in good currency' (Schon 1973)
naively projected into the future as instanced by Waring in the
debate on the New Zealand Planning Bill8 As an example, the
automation of production is particularly relevant to New Zealand

and can be perceived as 'good' or 'bad' ie

Anticipated value	Conclusion
1 Automated technologies are bad.	1 Artificially maintain same levels of scarcity to distribute income according to an old value formula.
2 Automated technologies are good.	2 Define and describe some compensating values to counterbalance their disruptive effect.

(Jantsch 1967; 245)

An illustrative feedback technique is the morphological method combined with a feasibility evaluation in a research environment. The method is used to disaggregate a certain limited set of phenomena into its conceptual components, detail the sequence of predecessor events for the phenomena set and deduce all the alternative solutions or states for each component. In a classic application of the method to jet propulsion Zwicky (as reported in Jantsch 1967; 175-180) identified 36,864 pure-medium jet engines configurations which were reduced to 25,344 by some internal restrictions. The method in 1943 identified the then secret German V-1 and V-2 rocket. At the time Churchill's scientific advisor failed to recognise the potential of the V-2 and claimed 'It will not fly'. The mental block is explained by a rejection of the idea of liquid propellants which was

part 6 .

THE DOMINANT PARADIGM

In addition to the means of detecting potential futures and the
necessary links with the present the issues that confront New
Zealand and the potentialities for their successful resolution
(within a value set) are prime concerns for the CFF. In part 2
some eleven areas of concern were identified which may benefit.
from study by the CFF.[9] But the problems are much deeper than
the need to consider options and alternatives to existing
policies. Many of the issues which concern New Zealand cannot
be resolved by traditional means - more of the traditional
solutions and their variants offer only temporary respite and
frequently cause greater dislocation elsewhere. The processes
of historical accumulation in culture, the economy, politics,
social policies, technological innovation, have resulted in a
societal paradigm that does not allow the resolution of the
pressing crises in society. Paradoxes continue to arise in
areas such as equity, women rights and the loss of gender
identities. Solutions to individual violence which offer
replacement by institutionalised violence, the continual
erosion of personal freedoms in the cause of greater freedom,
greater prosperity for a few means poverty for many are
a few of the inconsistencies.
Advancing technology presents a view of increasing unemployment
and the diminuation of opportunities for many to contribute to
society. As has been frequently noted in a number of contexts
(Schon 1973, Toffler 1970, Gouldner 1970, Wildavsky 1974,
Vickers 1979, Peccei 1978, Harman 1977, Dreitzel 1977, Lang 1967,
Blair 1974) the malaise troubling society is deep rooted and
cannot be resolved by treating the symptoms - a fundamental
change in the dominant paradigm that underpins society is required.
By paradigm is meant that sets of assumptions, usually implicit,

concerning the sorts of things that make up the world, how
they function, interact and are known. Paradigms are both
practical and cognitive, and in practice may operate as
either resources or constaints. Roles as well as the definition
of problems, acceptable solutions, culture etc are furnished
by the dominant paradigm. It defines reality. The exemplars
of the dominant paradigm permeate by their very nature all
facets of society. As Kuhn (1962) has shown a conscious
awareness of paradigms is usual only when they are contradicted.
Similarly the limits or rules governing social interaction tend
to become apparent only when contested. It is not only the
aspects of life which are selected as of interest or importance
by the paradigm but also those aspects of the environment which
are screened out (see,for example,Wittgenstein1953, Wildavsky
1974, Allison 1971, Berger and Luckman 1967). The complexities
of society demand both elite technical and theoretical knowledge
as well as an increased need for public participation in policy.

> The contradictions between these two assumptions –
> of causal determinism versus intentional change –
> have not been resolved, with the result that in
> practice individuals tend towards one pole or the
> other, as private citizens towards alienation,
> as public planners towards elistist reification.
> (Brown 1978)

This dicctomony is central to the task of the CFF as it is
charged with both engenderingpublic participation and studying
long term economic and social development in New Zealand.

Touraine (1977) distinguishes five elements which, in order,
lead to a paradigmatic change in the image of society. First

the type of society and culture is questioned so that a new
image of the future may evolve. This awakening identifies the
need for cultural mutation consequent social transformation and
finally implementation through political debate.

1   Social crisis

The obvious crisis is economic where uncontrolled economic growth
based on profit, artifically stimulated demand, consumerism, the
maintenance of inequalities and rivalry, extended credit etc
has become an end in itself.

The result is inflation and related difficulties. In an analysis
of the international urban crisis Blair (1974) identifies five
crucial aspects: the accelerating growth in size (surface area
and population) of cities; the widening gap between slums and
affluent suburbs; the breakdown in public transport systems;
population and environmental mismanagement; and the proliferation
of mental illness, violence and social conflict.

2   Paradigm crisis

The culture of industrial society is based on
evolutionism, that is, on the idea that societies
follow one another in sequence, each society
being more diversified and instrumental than the
preceding one.   (Touraine 1977; 22)

However the concept of evolutionism and its concomitants progress
and denaturalisation has been forestalled. Unlimited growth has
been exposed as a fallacy and the genocides and ethnocides,
concentration camps, Nazism and Stalinism have destroyed the
image of evolutionism as have numerous less obtrusive events.

3   Paradigm transformation

The rejection of growth as an end in itself, the
concern over centralisation, cities and mass society
has generated the new found values of community,
primary groups, Ohus and a search for equilibrium
and order.

What has been destroyed by this cultural [paradigmatic]
crisis, which we will continue to experience for a
long time, is precisely the illusion that a society
is entirely defined by its own change and its
instrumentality and that a society has no values and
thus no absolute power or fundamental conflicts.....
We are rediscovering the fact that social organisation
is the product of social relations, centred on society's
capacity to act on itself, thus centred on cultural
and economic orientations. We are also discovering
that social action is subjected to restrictions imposed
by resources, coming from the environment or from the
brain, and the whole body, even though social action
is the result of cultural orientations. (Touraine 1977;
25).

4   Social transformations

The new forms of social relations which may result from
a change in the dominant paradigm can in part be inferred
from the counter culture both in New Zealand and in other
countries.   Illustrative examples are discussed in part 7.

5   Political debate

The implementation of a new policy of change is the last

aspect of the process of social transformation.
This is instituted through a process of political
negotiation which may affect the weakening of the
political institutions evident in recent years in
New Zealand. (see for example Palmer 1979).

It is steps 2 and 3, paradigm crisis and transformation which
are the source of fundamental change in society and steps 1 and
4 are a reflection of these. It is the dialectical character
of the relationship between the dominant paradigm and the socio-
economic system which is central to an understanding of
significant change in society. From a sociological point
of view Dreitzel (1977; 88) identifies three typical functions
of the dominant paradigm for the maintenance of the prevailing
modes of production and reproduction. The dominant paradigm
provides the members of society with:

1   legitimations for the existing mode of production
        and distribution,

2   a motivational structure that links identity with
        the prevailing mode of production through
        socialisation procedures and initiation rites,

3   symbolic interpretations of the natural boundaries
        of human life.

Legitimation of production and distribution
Resources within society are distributed unequally between the
members. The forms of appropriation and allocation which maintains
inequality and apportions an increasingly larger share of wealth

and income to a small sector of society have been legitimised
by the redistribution of a fraction of economic growth. This
growth, of the order of 4.9% from 1948 to 1973 in advanced
capitalist nations (Kahn and Phelps 1979), has allowed an
absolute rise in the standard of living for the vast majority
of New Zealanders. Each succeeding generation since the turn
of the century, except for a brief period in the 1930's, has
enjoyed a level of material gratification which markedly
exceeded the experience of the previous generation. Because
the limits to growth are now becoming apparent and affecting
the smaller and weaker nations first the traditional means of
redistribution are being seriously questioned. The crisis as
it affects New Zealand goes beyond not only traditional trading
partners but also to the nations of the South Pacific as,among
other relationships,they are a source of labour.

Identity

The modes of socialisation, norms and values, supply self and
group identities and a motivational framework for the current
mode of production. The trend over time has been towards
greater permissiveness reinforced by the acceptance of childhood
and later youth as social and psychological stages in their own
right. The modern school system and extended tertiary study
have further supported this trend. The result has been a change
from external sanctions, corporal punishment, inviolate rules
to the "internalisation' of external constraints' (Dreitzel 1977;
95). Withdrawal of love, feelings of shame, guilt and embarra
ment have become the internal sanctions that control behaviour.

    As it is these new patterns of childrearing should
    in fact have produced-in direct correspondence

> to the needs of the economic and political systems -
> that kind of flexible yet authoritarian social
> character which guarantees political apathy,
> instrumental rationality, and economic submission
> under the consumer culture. (Dreitzel 1977; 95)

The identity crisis results from firstly the breakdown of the prime socialisation agency, the nuclear family. The concept of the nuclear family, is changing (Tomorrow's Families, in Education, The Welfare State?), and emotional needs previously meet by wider family links or in the workplace now overburden those existing families still intact. Secondly youth is a social group with its own subculture and through an extended education process without work or family responsibilities has become a new leisure class with freedom to explore societal values and norms. This has lead to a search for identity and authenticity at the personal level. The concerns of youth have permeated society so that increasingly members of society are seeking radical changes in their everyday lives.... Liberal sexual standards, new concepts of self-fulfillment, integration of moral, religious and aesthetic dimensions are emerging alternative concepts which undermine the dominant paradigm. The consent and motivation of a majority of the population for 'rational bureaucratic behaviour' is required for the survival of present beliefs.

Instrumental rationality

The scientific nonmystical world view has supplied the basis for economic development as nature is perceived as a mere resource for exploitation. This view is being challenged through an increasing ecological awareness, public concern over mental and physical health, conservation movements, the debate

over renewable resources and the rise of syncretistic religious
movements. Superficial trends like the emphasis on natural
foods, herbal remedies, home baking and back-to-the-country
attitudes are further indications of widespread interest in the
natural boundaries of human life. Death, illness and to a lesser
extent birth have been publicly banished - something that is
alien - that takes place behind hygienic hospital walls, where
man is depersonalised and medical machinery administer the bodily
functions.

> A culture which has no other interpretation of
> death than that of the end of a span of time is
> deeply disturbed in its relationship to nature.
> This is the reason why, outside of the established
> churches and denominations, a new religiosity is
> growing in which nature is something to relate
> to rather than something to control. (Dreitzel
> 1977; 101)

It is the need to give meaning to the natural boundaries of
life and to recognise the interdependence of man with nature
that has created the crisis in instrumental rationality.
The need to create a new image of the future is crucial to
the realisation of that future.

Part 7

SOCIETAL IMPLICATIONS

The critique of the dominant paradigm raises many questions concerning the future of the New Zealand way-of-life. At a pragmatic level the real problems facing New Zealand society may be perceived as demographic, economic and administrative rather than of a paradigmatic nature. The necessity of strong central government and state control to make the public accept the realities of a fragile economy and probable reductions in welfare, health and education expenditure are an alternative solution. The topical debate over the National Development Bill which strengthens the role of central government is a case in point.

However, the legitimations for such power have already been seen to be increasingly missing. Once a certain level of welfare has been attained and institutionalised,

> a peculiar dialectic begins to work: it seems
> that people tend more and more to claim the
> satisfaction of their material needs as civil
> rights, that is, as a constitutionally
> guaranteed (and legally specified) status.
> (Dreitzel 1977; 116-117)

This process is clearly evident in New Zealand (Quigley in the Second Reading Debate on the NZPB stated that responsibilities rather than 'rights' require emphasis). Another side to this dialectic is the demand for participation in the process of institutionalisation, that is, in the process of government itself. The conflict between bureaucratic administration and personal participation evidenced by regionalism, new ethnicity

(a Maori political party?), Women's Liberation etc, make the
continuation of strong central government after a 'triggering
incident' most unlikely.

The instrumental nature of the current paradigm can be
dysfunctional in that a single dimension (frequently expressed
in dollars) is selected to quantity a policy or area of interest.
Scientific-technological solutions have not always produced
the expected results and have dubious values (cheap houses at the
expense of community, 'kill ratios' in the Vietnam war).
Solutions imposed by centralised agencies, frequently under
conditions of crisis, may be impractical and rejected by the
recipients of policy because of estrangement and lack of
participation. Three implications which are likely to have a
major effect on the formation of a new paradigm can be recognised.
The first is,

> a growing tendency to state claims on the
> nature of one's own body and the nature of the
> environment in political terms. (Dreitzel 1977; 121)

As well as examples already mentioned the feminist movement is
continuing to expand and is likely be in the vanguard of pressure
for personal freedom. The claims by the feminist movement for
women to have the sole right to define feminity and have control
over their bodies is likely to increase. The negative demand
for the control of procreation functions, witnessed by the case
for abortion, may also in the future be stated positively in
terms of motherhood. Motherhood and the control over the
socialisation of children may become the prime areas of concern.
Commune life centred around a mother-child dyad with occasional
or variable male participation, or alternatively, public child

care agencies with both marriage partners sharing equally in work opportunities are both future options with radical implications for the mode of production.

A 'new religiosity' is a second change which through a concern with one's own body and a spiritualisation of nature may have profound implications for the societal paradigm. Meditation, yoga, psychedelic drugs, Eastern religions, a revival of interest in the issues arising over dying and death are all indications of change in accepted beliefs. One common denominator, identified by Drietzel, is that these experiences tend to be mystical in character and that mysticism resistsinstitutionalisation because of its markedly individualistic nature. Lang (1967; 64) is discussing the mystification of experience states,

> We all live under constant threat of our total
> annihilation. We seem to seek death and
> destruction as much as life and happiness. We
> are as driven to kill and be killed as we are to let
> live and live. Only by the most outrageous
> violation of ourselves have we achieved our
> capacity to live in relative adjustment to a
> civilisation apparently driven to its own
> destruction.

It is such pressures and alienation that create the desire for intense personal communication with ourselves and nature. The new religiosity is expressed outside established churches and theological authorities partly because of their relationship to business and politics and also because of hostility to their

conservative, bureaucratic and hierarchically structured nature. Religions may become nonhierarchical congregations based on equal participation without the symbols of authority, material wealth and power displayed by many established churches.

The third implication is the emphasis on the present which complements the two previous tendencies. It is the disillusionment with progress, with the obsession with economic growth whatever the personal, social and environment effects. As most people in New Zealand have achieved an acceptable material standard of life, now claimed as a 'natural right', the overriding concern has become the present - the enjoyment and maintenance of their present condition. The past elicits only superficial interest as a source of entertainment or as a cache of memorabilia. The future is viewed with skepticism, a view which the CFF may accept as a challenge. The satisfaction of material needs presents an opportunity for an exploration of sensual and spiritual dimensions of life that will allow the fulfilment of needs as yet unsatisfied.

In summary the range of actual and potential changes many of which raise fundamental issues of a paradigmatic nature are indicative of the inadequacies of the dominant paradigm. For reasons already discussed its support of increased central authority as a solution to the present crisis is unlikely to be accepted or successful. What is required is a new paradigm which fulfils the functions of; the legitimation of power, formation of identities and the interpretations of the natural boundaries of human life. Social reality must be understood so that it can be reconstructed. Fay (1975) proposed a critical

social science through which social theory is connected with social practice and translated into action.

> A critical social theory is one that attempts to explain the ignorance that people have not only about their social order but about their needs and wants as well; it attempt to explain their willingness to accept repressive and unsatisfying social conditions because they have a mistaken understanding of who and what they are .... But such an educative process is also one of interaction, as the policy expert must re-evaluate and alter his interpretations of the actors he is dealing with as they express their thoughts and aspirations, as they react to and reflect on the new self-understanding which he is attempting to get them to adopt.   (Fay 1975; 107)

The CFF has accepted the role of the policy expert through its publications and seminars on the future and its emphasis on participation. The next stage is the completion of the feedback loop in which the CFF revises its models to take cognizance of public response and draw out the implications of preferred developments.

Part 8

STRATEGIES FOR CHANGE

Paradigmatic change by its nature is not planned so that the CFF must look to strategies of planned change to fulfil its task. Planned change in human systems has been effectively categorized into under three genotypic strategies (Chin and Benne 1973), rational-empirical, normative-re-educative and power-coercive. All approaches to planned change utilize knowledge of either a technological nature, for controlling features of the environment, or behavioral or social phenomena (resistance to change, threats to status and/or morale, anxieties, communications, interpersonal or intergroup conflict, ideological reinforcement, etc.) Usually both forms of knowledge are required to institute change.

Empirical-Rational Strategies

These strategies assure that people are rational and will follow their rational self-interest once it is clear to them. If a proposed change can be rationally justified and can be shown (usually by those suggesting the change) to be in the self-interest of the target individual, group or community then it will be accepted by them. The Age of Enlightenment and classical liberalism through to the late nineteenth century positivistic sociology of Comte and Ward, are the main sources of this belief. Through a process of non secular

education, scientific investigation and research the evils of
ignorance, superstition, mysticism and dogma were replaced
by knowledge,reason and progress. The strategy still has
considerable appeal to a large segment of the population and
particularly the scientific establishments. The basic
response to an unmet need under this strategy is an appeal
for more research. As the main success of the strategy has
been in grounding and diffusing generally acceptable technol-
ogies through society not in social change   per se the
response to social issues has been to request more basic
research on behavior, relationships and institutions.
Society is viewed as a sociotechnical system in which systems
analysts and social engineers with advanced computers and
substantial theories of a quasi-mathematical nature 'solve'
social problems. The reinforcement of established ideologies,
the limited definition of problems, the concept of efficiency,
the impoverishment of political debate, reification and polit-
ical domination are the latent ideological components of
the supposedly politically neutral, value-free objective of
the scientific approach to policymaking.

Utopian thinking has in recent years tended to take the
form of extrapolations from the present as an input to
planning and action concerning the present. Through the
consideration of rational and   economic/resource type
alternatives (New Zealand Futures Game, CFF) utopian thinking
has become a problem requiring technical expertise and a
rational-empirical strategy. Dreitzel (1977;107) offers an

explanation for this impoverishment of utopian thinking ie.

> Today, after the experience of mass murders and world
> wars of the twentieth century we have become more
> skeptical. The brutality of the socioeconomic systems
> and the respective political ideologies have undermined
> utopian reasoning on the practical level. On a
> theoretical level, however, it has been destroyed by
> Darwin and Freud.

It may well be the disillusionment and impoverishment of debate
to which Dreitzel refers, which has stifled innovation and
creative thinking. Or, the absence of the dialectical
relationship between utopias and the existing order - those
ideas and values which contain in condensed form the unrealized
and unfulfilled expectations which represent current needs.

> These intellectual elements then become the explosive
> material for bursting the limits of the existing order.
> The existing order gives birth to utopias which in turn
> break the bonds of the existing order, leaving it free
> to develop in the direction of the next order of
> existence. (Mannheim 1936; 179)

Normative - Re-educative strategies

Under normative - re-educative strategies rationality and
intelligence are not denied but patterns of action and
practice are assumed to rest on sociocultural norms and
beliefs which are underpinned by the societal paradigm.
Change in this sense involves more than knowledge and

intellectual rationales for action and practice it includes,

at the personal level, in habits and values as well

and, at the sociocultural level, changes are alterations

in normative structures and in institutionalized roles

and relationships, as well as cognitive and perceptual

orientations.   (Chin and Benne 1973, 318-319)

Freud through an emphasis on the unconscious and preconscious

determinants of behaviour and a collaborative relationship to

therapeutic change contributed greatly to normative - re-edu-

cative strategies, as did E Mayo in industrial psychology

and M P Follett through the 'intergration of differences'.

A theory of change based on normative - re-educative methods

has been extensively developed (Bennis, Benne and Chin, 1961;

Marrow Bowers and Seashore 1967; French and Bell 1972;

Sofer 1961 ; Schein 1969) which builds on behavioural science

theory, research and practice.   Change utilizing normative -

re-educative strategies relies on collaboration between the

change agent and the client so that the change agent does

not seek to manipulate or indoctrinate the client. (Appendix 4

sets out the diagnostic procedures for an illustrative

strategy - Organisation Development.   A more radical approach

is offerred by Alinsky 1971).   These strategies effectively

operationalize the overt processes of paradigmatic change and

are supportive of reciprocal and noncoercive influence on

both moral and pragmatic grounds.

Power coercive strategies

As power is a component of all social interaction it is not
the use of power _per se_ which distinguishes this group of
strategies but in the ways in which power is accrued and
applied to effect change. The use of political or economic
sanctions through, for example, the legal system, the with-
holding of credit, the control of school curricula or, alter-
natively the use of moral power, sentiments of shame or guilt
are all forms of power - coercive strategies.

> In general, power - coercive strategies of changing
> seek to mass political and economic power behind the
> change goals which the strategists of change have decided
> are desirable. Those who oppose these goals, it they
> adopt the same strategy, seek to mass political and
> economic power in opposition. The strategy tends to
> divide the society when there is anything like a division
> of opinion and of power in that society. (Chin and
> Benne 1973; 325)

However if the democratic process is functioning effectively
political coercion need not be oppresive.[10]

The capability of political action to effect change is limited
in that the legitimation of a desired change does not
necessarily bring compliance. Abortion legislation in New
Zealand is experiencing difficulty both in operation and
interpretation as well as alienating segments of those groups
most affected by the legislation. This example emphasizes

the need for normative - re-educative strategies both before and after political action to achieve substantive commitments by the affected groups - the recipients of policy initiatives.

The CFF through its paramount function, studying the possibilities for long term economic and social development, and its espoused collaborative approach to conscious raising and issue surfacing does not have a power -coercive orientation. It is not charged with grounding and diffusing generally accepted technologies, the main use of empirical - rational strategies, so that the appropriate family of strategies for the CFF is normative - re-educative.

STRATEGIES FOR THE CFF

Much of the output of futurology over the last decade has
been of images of the future constructed by scientists,
advisers and planners.

> The futures they [scientists, advisers, planners]
> have studied have been their own constructed images,
> rather than the images of those with the power to
> influence events. (Eden et al 1979;56)

The influence of such projections or scenarios has been
mainly through publication and their ability to generate
controversy, concern, imagination, interest or fascination
of the public and/or decision makers. As has already been
discussed in part 5   the techniques available to fore-
casters range from mathematical modelling with quantification
of parameters and values, to qua l itative and subjective
scenarios. For the construct to have a direct policy
impact it must materially assist the policy maker. (The
CFF is charged with informing government as well as members of
parliament and public.   ) To do so the constructs will ideally
offer or explore alternatives in terms of political activity,
not the prediction of future events with political activity
held constant.

Social problems are of an inherently different nature to
those of an engineering or scientific nature (eg. bridge

building, chemical manufacture, milk production). Problems in the natural sciences are in general definable, separable and may have identifiable solutions. In contrast the long-term problems of government (and New Zealand) especially those of a social or economic nature which are the concern of the CFF are not usually well defined and are likely to rely on political decisions for resolution. They are not solved in the way that physical problems can be - they receive recurring situational adjustments as they are re-identified as sources of social or political irritation.

..... the classical paradigm of science and
engineering - the paradigm that has underlain modern
professionalism - is not applicable to the problems
of open societal systems. (Rittel and Webber 1973; 160)
The representation of the two major political parties in New Zealand on the CFF may assist in ensuring that political implications are not overlooked if the parties continue to be the major political forces in New Zealand and their representatives are aware of nascent issues and developments for New Zealand. Rittel and Webber (1973) have identified a number of dilemmas in planning and the development of social policy which, being germane to the task of the CFF are discussed below.

The understanding of a social problem is dependent on the

statement of the problem which is interpretated in terms of a solution. For example, if education is judged inadequate what does improvement mean? Improved teacher : student ratios, more specialist teachers, more highly trained teachers, better motivated teachers, continuity of teaching, or; improved buildings, better lighting heating etc, or; is the problem in the students, in health, motivation, diet, intellectual ability, or; in parent interest, community facilities or distractions, television, relevance of subject matter being taught, prevalance of drugs or crime, ethnic or socio-economic factors, rural/urban disparities and so on. The selection of anyone of these potential root causes defines the locus of the problem and a possible solution. In effect the formulation of the problem is the solution. As the CFF is charged with identifying issues rather than resolving them its task contains a fundamental dilemma. A knowledge of all possible solutions is required for a definitive formulation of a social problem. But, as the education example demonstrates, in an interactive, interdependent open system there is no end to the casual links. This is the reason why education, (and health or social welfare) is an endless sink for resources - it is always possible to identify improvements both in terms of quality and equity. No final solution exists, the constraints on improvement are not inherent in the problem but are external, resources are required elswhere. Even after implementation the full consequences of policy initatives may not become apparent within

the limited time span of the policy.

Although policy alternatives can be assessed by certain criteria (recognition of political realities, quality of policy formulation, needs of society) there are no objective criteria for independent assessment. Experience elsewhere is of limited value as each problem is essentially unique (as has been observed in the case of history, part 3). Judgement on alternatives depends on such influences as personal or groups interests and values, ideological predilections and the perceived range of alternatives. Once a choice is made and implemented, resources have been utilized and perceptions shaped - the process cannot be readily reversed. The appearance of undesirable effects gives rise to another problem which is subject to the same dilemmas.

For example the building of a secondary school costing millions of dollars cannot be reversed if the site is in some sense inadequate or if classrooms are built to take twenty-five students then the size of classes is effectively limited.

The level of generality at which a problem or explanation is offered (see Allison 1971) cannot be resolved on logical grounds. If a solution or range of alternatives is presented in terms of a particular causal explanation, removal of the cause presents another problem of which the original problem was only a symptom. The level and choice of explanation is

arbitrary, however it is guided by a value set, usually
that of the policy analyst, so that it conforms with his view
of appropriate action. Such choices of appropriate action
are judged by a pluralistic society utilizing a range of
different and sometimes conflicting values. Given the
emphasis of the CFF on participation and alternatives it
must attempt to encompass the range of alternative values
rather than focus on some 'best' solution. There is no
social-welfare function which allows the unambiguous choice
of alternatives in social policy. The choice of positive
non-zero-sum developmental strategies for inter-group
rivalries where possible, a bias towards individual choice
and the amelioration of large system problems are widely
accepted approaches to the reconciliation of diverse social
values.

> Whichever the tactic, though, it should be clear that
> the expert is also the player in a political game,
> seeking to promote his private vision of goodness
> over others'. Planning is a component of politics.
> (Rittel and Webber 1973;169)

The CFF is certainly a part of the political process. If
it is successful in generating discussion concerning the
future it becomes subject to Marshall's criticism (in the
debate on the NZPB) of distracting attention from the press-
ing problems of the present.

SUMMARY

In summary the belief (myth) on which the CFF was founded –

a bipartisan organisation isolated from political controversy
generating informed rational public discussion on future
alternatives and likely trends, and bringing long term
considerations to bear on policy decisions in government and
the community. - has proved of limited value. The publications
and seminars of the CFF have not captured the public
imagination or interest. This is partly due to the constraints
on government agencies in terms of generating innovative
possibly controversial or radical characterisations of policy
options and ensuring wide public exposure. And, also through
the use of mainly empirical-rational approaches to change
as opposed to more suitable normative - re-educative strategies,
possibly though a desire to be seen as impartial. (The
impact and techniques of CFF activities are discussed in
appendix 1). The dilemmas that arise in the identification
and choice of policy options suggests the resources of the
CFF may be more usefully employed on metapolicy analysis
(how social policy can be developed) rather than on the
identification of policy alternatives. The other major area
of CFF interest - 'the implications of new and prospective
developments in science and technology', has been considered
in part 5.   Assuming the CFF has an adequate information
collection system to identify technological and scientific
advances the task for the CFF is one of interpretation,
dissemination and fascination of the client groups (parliament,
community groups, the general public and government.

OPTIONS

I   The CFF may continue to produce rational presentations
of alternatives and trends which although impartial,
accurate and clearly and competently presented, will not
generate widespread public or political interest unless
linked to action.[11] The option is unlikely to be accept-
able to the commission itself or in a period of economic
stringency to government.

II   The identification of select target groups with which
the CFF will develop a collaborative relationship
resulting in a utopiam type statement and presentation of
that groups scenario for New Zealand.

III   The production of 'Battle of Dorking' type scenarios
which are an input to policy formulation and a focus
for public debate.[12] As such, scenarios which fascinate
are most unlikely to be the work of a committee so that
they may well be as a result of option II.

The fundamental dilemmas facing the CFF are the pluralistic
nature of New Zealand society, the lack of a well defined
social welfare function, the political nature of planning and
forecasting and, the inability to separate social problems
from solutions. <u>Future studies must be linked to viable
action alternatives to generate public participation.</u>

1   See, for example, Fraser 1966, Perlman 1968, Berger & Luckman 1967.

2   A paradigm is a constellation of assumptions, beliefs, values, norms, etc, usually implicit, shared by the members of a community. Roles , as well as the definition of problems, acceptable solutions, culture and other facets of human relations and activities are furnished by the societal paradigm. Shared paradigms do not imply shared rules as isolatable elements are abstracted from the societal or dominant paradigm and deployed as rules for particular aspects of social life.

3   In the introduction to Report on the Commission's Seminar on Forecasting Techniques (CFF 1977) details are given on the background to the CFF. Selected text and terms of reference (for the CFF) from the report are contained in appendix 5. A prelaunch description of the CFF was given by Munro in Futures October 1976.

4   See Dror 1968.

5   In a Canticle for Leibowitz (Millar 1959) artifacts from the past are treasured, reused and modified for new uses. Past technological achievements are revered by many. In contrast Crowley (1979) in utilizing a similar theme of recovery from environmental and man-made disasters there is no desire nor effort expanded on recreating technology nor technological based society. The shift away from technological solutions is significant over the last twenty years.

6   The Battle of Dorking was written by Sir George Tomkyns Chesney, founder of the Indian Civil Engineering College and a colonel of the Royal Engineers,to focus national attention on the case for conscription. It was published in the May issue of Blackwood's Magazine in 1871.

Chesney had written the first truly effective account of a future war and at once he found millions of readers throughout the world. The overseas editions... [five] plus the translations...[seven] plus the seventeen counterattacks and imitations in English - these offer compelling evidence of the way in which an imaginative projection derived from factors common to all large industrial nations, could in the space of three months arouse the interest of innumerable readers for whom it had never been intended. ...

[Chesney] had responded to the conditions of his time by converting the tale of the war-to-come into a popular and deliberately political device for demonstrating the dangers that seemed to threaten an island nation in the new epoch of breech-loading artillery and iron-clad ships of war... Chesney gives a faultless demonstration of the war-to-come. He shows the secrets of the game are a fluent narrative, realistic detail and a calculated bias (Clarke, 1979, 94-95).

Clarke (1979;183) goes on to note that

> These descriptions [Chesney's and others] of the war-to-come were labours of love, offerings to the nation from distinguished professional men who wished to present their expert knowledge and earnest recommendations in <u>the most effective way possible</u>.

Much of Clarke's analysis is particularly relevant to the task of the CFF.

7   See Vickers 1968

8   See appendix 2.

9   This paper does not purport to offer a definitive list of areas of study for the CFF. The CFF (1977) has defined a number of areas for study. The companion agency, the NZPC, has in <u>The Welfare State?</u> (NZPC, 1979) selected aspects of social policy to present to the public for consideration.

10 Spitz (1949;256) in his analysis and criticism of anti-democratic thought states in his comclusion:

> ... the unhampered organisation of conflicting ideas, far from weakening the democratic state, strengthens it; for it ensures that each man is given both the opportunity to influence the making of decisions and the freedom to press for their recall, a freedom which enlists rather than rebuffs the sentiments and loyalties of men.

11 This view is supported by the material presented in appendix 1. In addition a report in <u>Futures</u> (June 1979) states,

> The utility of the CFF reports would be increased if they contained specific policy recommendations, rather than conjectural notions in what is unfortunately dry bureaucratic language... The ultimate value of the CFF depends on its output, which must be realistic and usable in government policy making. (Lodge 1979;265)

12 Brian Milnes, executive director of the Newspaper Advertising Bureau was quoted in National Business Review,17 October 1979, as stating,

> "It is generally a sad fact of life that a soft piece of research superbly packaged and presented will generate more action, more business, than a superb,hardnosed study presented in almost computer printout format. How you say it is at least as important as what you have to say..."

The medium cannot be ignored at the expense of the message - a point not always fully accepted or recognised under the rational-empirical approach to change.

APPENDIX 1

COMMISSION FOR THE FUTURE : RESPONSE TO CHANGE

The approach adopted by the CFF to future studies and change has

been clearly articulated. Professor Duncan, chairman of the

commission was reported in The Dominion, 20 August 1979, as stating

    'We talk to everybody. but don't advise anybody',...

    'What we are trying to do is raise the consciousness

    of the public about the possibilities for the

    future and that allows them to influence the politicians.'

How possibilities can be realised or used to influence politicians

are not mentioned. Professor Duncan continued,

    'We are trusted because we are neutral,' ... 'When

    you look back in history you see that the people who

    have been most influential have not been those in

    power.'

These two statements, the belief in neutrality and the surprising

statement concerning power are further evidence of the

rational-empirical approach of the CFF. In a CFF pamphlet entitled

'Where does this country's future lie? ... your help is needed'

the following steps are suggested:

    .   Write to CFF and tell them your ideas,

    .   Talk about New Zealand's future at home and

         at work.

.   Join locally in nationwide workshops.

.   Read books on the future. Watch and listen
     to programmes about it.

.   Organise groups on any of the above.

The evolving image of the CFF is of a neutral rational
organisation attempting to gain the attention and involvement
of New Zealanders in future studies – a time intensive activity
remote from political action. In the Report of the CFF for the
year ending 31 March 1979 ,   three completed projects (a
statistical study of decreasing fuel supplies, identification
and exploration of individual New Zealanders images of the
future, and computer generated scenarios for the Pacific region)
are all along the lines of conventional scientific research.
Continuing projects are similar with two notable exceptions.
A 'serious recreational game for adults' entitled 'New Zealand
Population Game' which, if capable of fascination and widely
disseminated may have an impact on current values. The second,
the Praeger's project, 'designed to alert people to the possibility
of self-employment and alternative technologies' is a manifest-
ation of a theme apparently adopted by the CFF that 'small is
beautiful'. In 'public participation' the main activities of the
CFF for 1978 were a School Futures Game and a series of workshops
on national goals which involved some 600 people for a short time –
about the roll of one average size intermediate school. The
School Futures Game has a reading age of 12 years and requests
resource-demand and population-growth decisions which result in
one of 12 scenarios. The basis of the game is energy supply and

demand. In the Teachers' Guide to the game warning is given
concerning overuse as 'It gains nothing by repetition' and to the
fact that students may and have found the game unrealistic,
possibly because of the simplifying assumptions concerning
'change, growth, cause and effect and parameter definitions.
It is stated that the game accepts ''conventional wisdom' concerning
parameter relationships' (cause and effect) and the criterion
for classifying futures good or bad is sustainability.
Controversial issues such as abortion are deliberately excluded.
As a classroom exercise the game is   adequate. However
it is highly supportive of instrumental rationality and all that
philosophy entails in the context of political decision making.
As such the approach is fully consistent with other CFF activities.

The significant activity of the CFF in 1979 has been the
release of the 'New Zealand in the Future World' trilogy. This
study has been described by CFF staff as,

> The Commission's first task, after acquiring full-time
>
> staff early in 1978, ... The CFF plans to initiate
>
> another, much wider, programme of workshops to discuss
>
> the 'New Zealand in the Future World' booklets once
>
> all three have been released. (Hunt, 1979; 20-21)

The booklets have been released and their initial impact can be
gauged from media reviews. A selection of indicative reviews
are discussed below.

Dominion columnist J V White in discussing the first in the
series, Resources and Technology - Sustainability , states,

> Obviously the Commission faces a formidable task,
> [identification of long term policy areas which
> urgently need clarification and options available],
> perhaps an impossible one; nevertheless it is
> difficult to avoid some disappointment at this
> first effort.   [The Dominion 27 August 1979]

The review is critical of the tenor of the booklet and the limited range of options. White also raises the issue of what the booklet will achieve,

> Discussion on key issues? The important ones are
> already being discussed ... We could go on for the
> next two decades happily arguing in forums ranging
> from the village group to the prestigious CFF
> itself about a wide variety of topics without ever
> reaching agreement.

> Differing interest groups will line up in the same
> predictable way till people will at least [last?]
> cry in one loud voice, "For the love of God,
> enough paper, enough reports, enough chatter.
> Give us action, bold and strong."

It is this inability to link CFF activity with action which White correctly identifies as a dysfunctional aspect of the CFF. Effort is dissipated on discussion rather than on action. Although a CFF pamphlet describes the commission as the 'hub in the wheel of the future studies so the CFF allows you [the public] a direct line to policy making for our long term future' this statement is questionable. The CFF has its own rational-

empirical approach to change which acts as a filter for ideas.
As social problems and solutions cannot be adequately
separated, and as policy options may be foreclosed by policy
decisions the role of the CFF in policy making is dubious.

In a reply to the review by White also published in The Dominion
(4 September 1979) the Director of the CFF is reported to
believe,

> if a rational alternative such as electric public
> transport were offered, people would give up the
> status race for shinier, better cars. Electricity
> is a renewable resource.

A very clear statement of the rational, economic man concept!
In addition electricity is not renewable, it is a mode of energy
distribution which requires a primary energy source (coal, gas,
hydropower from lakes which silt up, nuclear, etc) for its generation.

In the NZ Truth (18 September 1979) Don Bryant criticises the
CFF involvement in flag-flying for New Zealand's Aerospace
Industries. He also claims, with some justification, that
committees, commissions and the like tend to produce unimagin-
ative reports which lack appeal. The description of airships
from the first booklet is quoted as an example,

> such craft are 'best suited to situations where
> vertical take-off is an advantage but where slow
> speed is not a disadvantage'.

.The newsletter of the New Zealand Demographic Society
(September 1979) contained a review of Resources and Technology
Sustainability. The reviewer states his acceptance of 'this
technological crystal ball gazing' by,

> With enthusiasm, tempered by a degree of scepticism.
> Enthusiasm, because at very least, this is a
> beginning ... Scepticism, for three main reasons.
> First, because I find the assessment of available
> resources to be persistently cornucopian ...
> Scepticism, also, because many of the future options
> presented herein I see as already foreclosed ...
> Finally, scepticism because I doubt that anyone is
> ready to listen. (Scott 1979; 34-37)

The two directions in which the CFF may influence policy are
also discussed. Under the first CFF joins the large number or
organisations and pressure groups attempting to reshape public
opinion. Scott notes that the great majority fail and given
the rational-empirical approach of the CFF success appears
unlikely.

The second direction, direct to government, requires not only
competence but also credibility. Scott believes the CFF is
developing the competency but has been unable to establish
credibility - his solution, more time and greater resources.

The second booklet, Societies in Change a question of scale,
appears to have generated little comment. The booklet 'tries to
convey three messages' according to the back cover; 'New Zealand

a period of rapid social change', 'such change poses

challenges', and 'we can meet challenges either by trusting

tralised government to lead us on our journey into the

orld, or by reducing the influences of government'. The

d choice may exclude many viable options. Although issues

as bureaucracy, changing life styles, multi-culturism,

rns of production, social structure are discussed it is in

ical, either/or rational man approach which offers no

bilities for the resolution of social issues.

review of the third booklet, <u>International Relations</u>

<u>tunities</u>, JV White (The Dominion 19 November 1979) raises

us questions concerning, for example, a forced choice, ie

onomic or social growth,

'...should economic growth be accepted as a specific

major goal? Or should the achievement of social

goals - the quality of life - be our first priority?"

The point has been made many times, in respect of the

Planning Council, by economists and politicians that

these two goals are not mutually exclusive.

reign policy,

"Since we would attempt to conduct our affairs in

such a way as to avoid threatening any other country

we would not expect to be exposed to external threat

ourselves"

... Surely some members of the commission must have heard of, even experienced in some way, events in Poland, Finland, Norway, Denmark, Holland and Belgium among others in 1939-40 and later!

And on economic development, three mutually exclusive options are presented,

Specifically refering NOT mutually exclusive

1   Self-reliance on our own resources;

2   industrialisation using imported resources and our own energy;

3   self-sufficiency, defined as making products for the domestic market and exporting unprocessed products and by tourism.

The report goes on: "The advantages and disadvantages of putting specific emphasis on one or other of these options is a complex task which the CFF will undertake over the next 18 months". I strongly suggest that they save the taxpayer's money by refraining from doing any such thing. We have been working along the lines of all three options for years. To try to place emphasis on any one of three quite arbitrary and ill defined 'options' is almost nonsensical.

What White has identified is an almost classical example of instrumental rationality - the detached impartial expert breaking through a haze of values and political compromise to identify the correct solution.

> With arrogant confidence, the early systems
> analysts pronounced themselves ready to take
> on anyone's perceived problem diagnostically
> to discover its hidden character, and then,
> having exposed its true nature, skillfully to
> excise its root causes. Two decades of
> experience have worn the self-assurances thin.
> (Rittel and Webber 1973; 159)

White continues by noting the CFF seem unaware of the economic concept of market, the biased and inadequate nature of the booklet and draws the same conclusions as he did for the first booklet.

The main deficiency in the concept of the CFF is the failure to link participation in CFF activities with political action. The problem is further exacerbated by the apparently complete acceptance by the CFF of the natural science philosophy, instrumental rationality, and its concomitant change methodology, an empirical-rational approach. To engender awareness of social change (and the social implications of economic and technological change) the problems must be made compelling but solvable. As there is no desired outcome from CFF participation the result is disillusionment. The CFF is incomplete and misguided. Part of the diagnosis and remedy is paradoxically

contained in one of the first CFF publications CFFRI/78,

> A related 'disease' [related to ritual wastage ie the
> 'professionalisation of everyone' which has tended
> to make occupations 'over-contemplative and underactive']
> in New Zealand is the committee, in itself a ritual
> whereby professionals particularly engage in
> unproductive activities and conflicts. Another
> important deficiency in the New Zealand context
> historically has been the absence of planning, especially
> in the social sphere. However it should not be assumed
> that now there are planning institutions all will be
> well.... (Pitt 1978; 17)

Pitt notes a number of essentially political reasons for the
failure of planning. The political dimension is effectively
ignored or held constant under instrumental rationality so that
the CFF is unlikely to engender significant change.

NEW ZEALAND PLANNING BILL - SECOND READING

Summary of statements of philosophy on future studies and social change, identification of functions and objectives and, alternatives and directions for the CFF arising from consideration and enactment by Parliament of the New Zealand Planning Bill.

Hon G F Gair (Minister of National Development moving the Bill)

- Paramount function: to study the possibilities of the long-term economic and social development of New Zealand.

- Make possibilities available to members of Parliament.

- Publish for wider dissemination.

- Identify issues rather than resolve them.

- Membership of the commission is bipartisan.

- Three objectives:

    i   to ensure a sound basis for long-term policy is arrived at by a process of wide consultation,

    ii   to increase general awareness and understanding of the key issues related to New Zealand's development,

iii   to ensure that long-term considerations are brought
      to bear on policy decisions throughout the Government
      and the community.

- The CFF is concerned with the far future so that by its time
  scale and the very nature of its study tends to be removed
  from the political scene.

Hon R O Douglas (Opposition)

- New Zealand if it is to survive as a trading nation cannot
  'rely on fortuitous price movements'.

- Limited resources of the CFF must be concentrated rather than
  'try to cover every aspect of New Zealand's way of life'.

Marilyn Waring (Government)

- 'We have to change the present to fit the image of the
  desired future, rather than looking back and pushing that
  past view forward for the future'.

- Maximise options for New Zealand yet maintain flexibility.

- Developments and options in areas which may affect New Zealand
  include medical research (blood substitutes, artificial hearts),

energy (solar power, bulk energy batteries, hydrogen based economy), agriculture (high yield crops, future of world food market), communications, information storage and retrieval, transport, business/work, leisure and even in behaviour and society.

- Systematic forecasting using 'the likely consequences of present trends continuing and the possible alternatives' is criticised as being a too narrow approach to future studies. A combination of forecasting and 'pure native hunch' is required.

Mr Latter (Government)

- The need for the CFF is exemplified by the change in the world energy position or the economic trading position over the last 5 to 10 years which were not anticipated.

- Assess the factors in the survival of New Zealand and the New Zealand way of life and then the person in charge (government) takes over.

- The CFF is the forward intelligence section of the NZPC.

- Planning cannot be in isolation.

Mr Quigley (Government)

- There is a need to avoid some of the past mistakes in urban
  development which have contributed to such social problems
  as misfits in our community, dropouts and broken marriages.
  Responsibilities rather than 'rights' require emphasis.

- In the problem of industrial relations, is there an inviolate
  right to strike as the community suffers while the striker
  continues to enjoy community facilities. Who determines
  priorities, what will be produced, how, and who will gain
  the benefit from production?

- Should planning be left to individuals, market forces or
  should government intervene for the benefit of the country?

Hon M Connelly (Opposition)

- Planning is not inconsistent with the concept of democracy
  and can achieve desirable goals and ends in the interest
  of the people.

- The CFF (and NZPC) will need the voluntary co-operation of
  all sections of the community in setting goals and objectives
  and effecting them.

- Social objectives need to be pursued and priority given to those in greatest need, ie family and family life, the young, aged, handicapped and infirm.

- A co-operative approach to production is required to achieve industrial harmony.

- The CFF should be correctly structured as to representation, machinery and techniques.

- The establishment of two bodies, NZPC and CFF for planning is criticised as being wasteful, inefficient and ineffective duplication.

- The highest level of perfection in formulating policies, representing alternatives and options, setting priorities and targets, and assessing resources will be of no avail without realistic complementary Government policies.

Mr Birch (Government)

- Japan is a good example of a country that has consciously set its objectives on a national basis.

- New Zealand has left long-term economic decisions to different sectors.

- New Zealand must avoid overplanning and overanalysis.

Dr Wall (Opposition)

- Planning can be summed up by a quote from Goethe, 'How can I know whether a wind serves me ill or fair unless I know where I am going?'

- National planning in Japan is criticised as 'the subjugation of a noble people to narrow type economic aims'.

- The Government was accused of appointments to the CFF of people of its own philosophical outlook with no political sensitivity or flexibility in allowing for variations in outlook that are associated with the Civil Service. 'We have only to look at the record of planning bodies in New Zealand over the last 25 years or more to see how much their philosophical outlook has coloured in many significant ways the development of this country and its social advancement. We are playing with very dangerous tools if we give a body an overall social, cultural and scientific advisory authority'. Examples of town planning and the destroying of Maori culture were discussed.

- 'The philosophy of the legislation is to decide that we will go somewhere, get all the information and find out later on where that somewhere is. Social progress does not work in that way, and never will'.

- 'I wonder who planned it [CFF]. I am sure it was not just Professor Duncan [Chairman of CFF]. I wonder whether it was Chapman, Leay and company [National Party executive] who planned it as a long-term political objective'.

- 'CFF ..... has no members who reflect the wide cultural background of so many New Zealanders with origins in different parts of the world ..... have a narrow technocratic group ..... tied to the hard right wing of the Government ..... Exactly the same thing happened in Italy and Germany between the wars, when efficiency became the goal and technical progress was seen as the prime objective of all social advancement.

- The Bill emphasises technical excellence, information and advancement.

Mr Minogue (Government)

- The objective (for New Zealand not the CFF) is to create an economic base to support social and cultural objectives.

- A high priority must be placed on bringing together land-use data to plan capital expenditure.

- The CFF is to advise well in advance about circumstances likely to make an impact on this country, rather than projecting answers to problems we do not know about.

A *table of the individual techniques* and elements of techniques which are reviewed in the following chapters is provided below and may give a broad idea of their applicability and their principal orientation. The graphic indications are necessarily imprecise and are open to discussion. Techniques extending over many levels seem to be relatively rare. Exploratory techniques are crowded into the lower (technological) levels, while normative techniques are firmly anchored in the upper (impact) levels but penetrate courageously into the technological levels.

It will be recalled that the significance of the eight levels of technology transfer was given in Chapter I.1. of this report :

I = Scientific resources
II = Technological resources
III = Elementary technology
IV = Functional technological systems
V = Applications
VI = Environments
VII = Social systems
VIII = Society

The following graphic signs are used in the table below :

* (*)   Level of (isolated) application (with brackets : doubtful or less formal)

⋈   · Substantial combination with horizontal factors

          Direction and penetration of transform method (vertical) marks ; individual evaluation for that level possible ; dotted line : uncertain)

←——⊢   Strong stimulation for (human) feedback

TECHNIQUE (with section number showing where it is discussed in this report)	LEVELS OF TECHNOLOGY TRANSFER							
	I	II	III	IV	V	VI	VII	VIII
II.2. *INTUITIVE THINKING*								
II.2.2. *Brainstorming*								
Straight brainstorming		(*)	* *	*	*	*	(*)	(*)
" Buzz group " technique			* *	(*)				
" Oper. creativity "		*						
II.2.3. " *Delphi* " technique				(*)			*	*
II.2.4. *Utopia and science fiction*								
II.3. *EXPLORAT. FORECAST.*								
II.3.2. *Extrapolation of time-series, anal. models*			*					
Adams			*					
Isenson		⋈	⋈					

TECHNIQUE	LEVELS OF TECHNOLOGY TRANSFER							
	I	II	III	IV	V	VI	VII	VIII
Hartman		⋈	⋈					
Lenz (biol. growth analogy)		⋈	⋈					
Holton		*	*					
Putnam		⋈	⋈					
Ridenour					*			
II.3.3. *Extrapolation of time-series, pheno-menological*				(*)	*		(*)	
Single trends			*	*	*	*	*	
Precursive events			*	*		*		
Envelope curves		*	*	*	*			
II.3.4. *Learning curves*				*				
II.3.5. *Contextual mapping*		*	*	*	*			
Trend as process			*	*	*			
Trend as evolution		*	*	*				
II.3.6. *Morphological research*			*			*	*	
II.3.7. *Scenario-writing and iteration through synopsis*								
Scenario					⋈	⋈	⋈	⋈
Iteration					⋈	⋈	⋈	
II.3.8. *Historical analogy*					⋈			
II.3.9. *Elements of probabi-listic forecasting*				⋈	⋈			
Mansfield					⋈			
Lancaud and Trachsel					⋈			
Propagation of variance			*		⋈			
Bayesian statistics					⋈			
Monte Carlo			*		⋈			
Parametric sensitivity				*	⋈			
II.3.10. *Economic analysis*					⋈	⋈		
Undisc. return on inv.								
Olsen								
Pacifico								
Teal								
Sobelman								
Discounted cash flow " Batch-wise " DCF					⋈			
Disman								
Hoskold								
Continuous DCF								
SCAIR (G.E.C.) Cramer & Smith Dean & Sengupta								
Risk assessment								
Bönke		⋈			⋈			
Kotler		⋈			⋈			

II.3.11. Operational models
- Gaming
- Rigid models
  - Roe
  - Churchman
  - Lenz
  - Abt Associates
  - Battelle
  - Business models

II.3.12. Aggregated level
- Statistical models
- Input/output analysis
- Chains of industries
- Diffusion of technology
  - Mansfield

II.4. NORMATIVE FORECAST.

II.4.1. Horizontal decision matrices
- Resources deployment
- Programme cube
- French res./res. matrix

II.4.2. Vertical decision matrices
- French Res./Ind. matrix
- Research/programme matrix
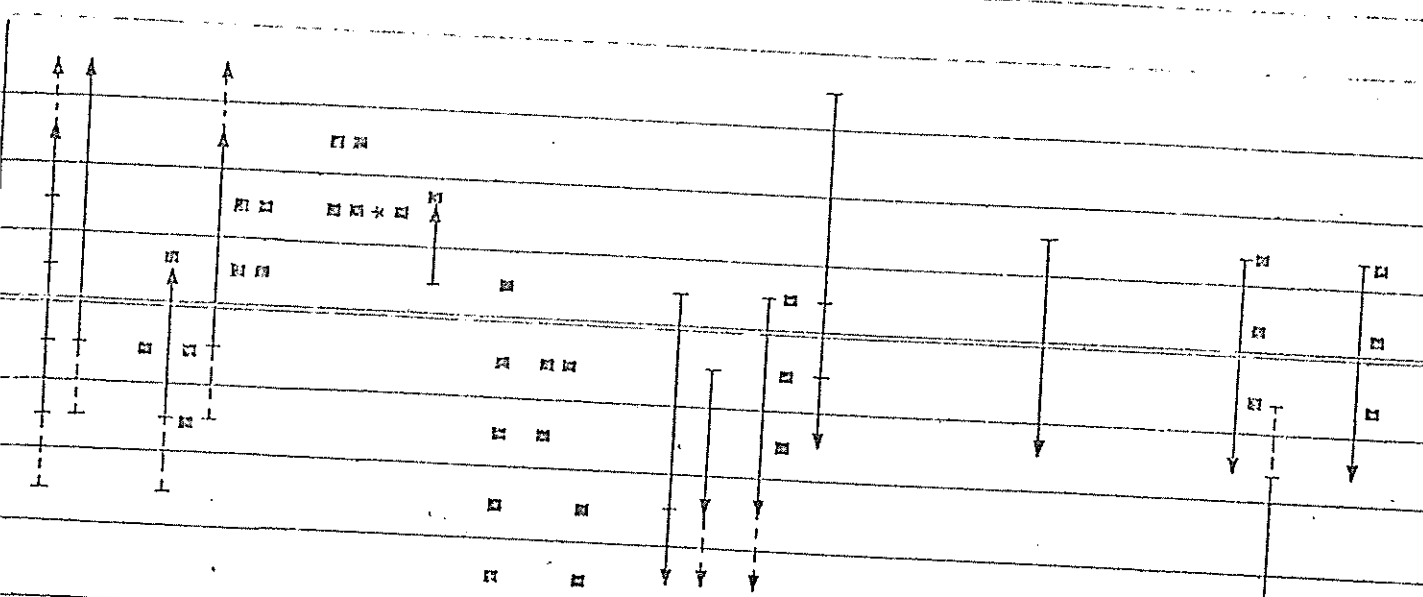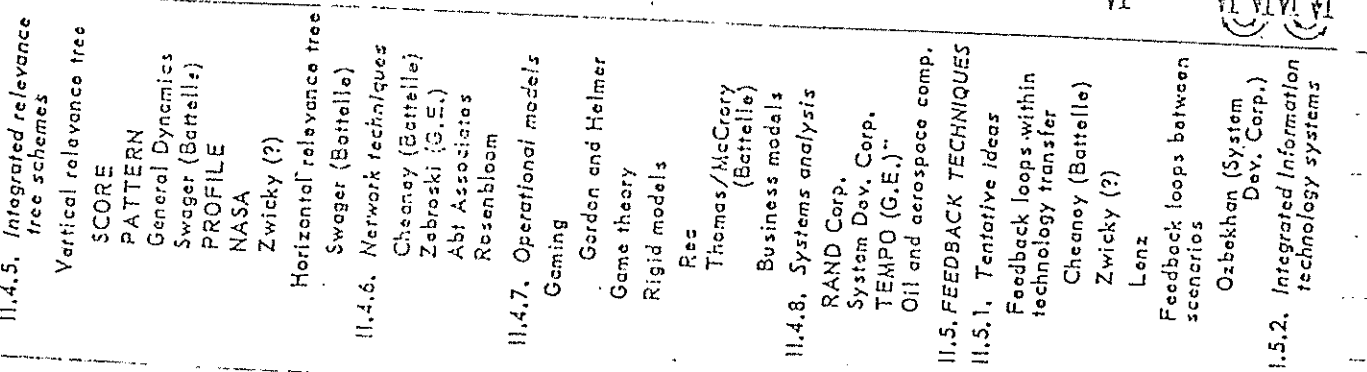- Stanford Research Institute
- Walter (North American Aviation)

II.4.3. Simple techniques, operations research approach
- Econ. analysis/OR
- Linear programming
  - Asher
  - Freeman
- Dynamic programming
  - Hess
  - Rosen & Souder

II.4.4. Simple techniques decision theory approach
- Check lists
- Hetrick and Kimball
- Dell'Isola
- Mottley & Newton
- Gargiulo
- Ansoff (ec. an./dec. th)
- Pound (relevance tree)
- Beckwith
- U.S. Navy

II.4.5. Integrated relevance tree schemes
- Gaming
- Vertical relevance tree
  - SCORE
  - PATTERN
  - General Dynamics
  - Swager (Battelle)
  - PROFILE
  - NASA
  - Zwicky (?)
- Horizontal relevance tree
  - Swager (Battelle)

II.4.6. Network techniques
- Cheaney (Battelle)
- Zebroski (G.E.)
- Abt Associates
- Rosenbloom

II.4.7. Operational models
- Gaming
  - Gordon and Helmer
  - Game theory
- Rigid models
  - Roe
  - Thomas/McCrory (Battelle)
  - Business models

II.4.8. Systems analysis
- RAND Corp.
- System Dev. Corp.
- TEMPO (G.E.)
- Oil and aerospace comp.

II.5. FEEDBACK TECHNIQUES

II.5.1. Tentative ideas
- Feedback loops within technology transfer
  - Cheaney (Battelle)
  - Zwicky (?)
  - Lenz
- Feedback loops between scenarios
  - Ozbekhan (System Dev. Corp.)

II.5.2. Integrated information technology systems

ADVANTAGES AND DISADVANTAGES OF ANALYICAL TECHNIQUES
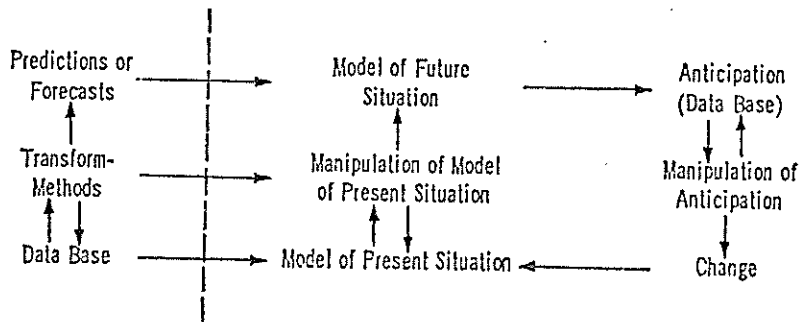
(Source Maestre and Pavitt, 1972)

Table VII : ANALYTICAL TECHNIQUES IN GOVERNMENT SCIENCE POLICY : A SUMMARY OF THEIR ADVANTAGES, DISADVANTAGES AND USE

FUNCTION	TYPE	ADVANTAGES	DISADVANTAGES	PUBLISHED EXAMPLES OF USE OUTSIDE DEFENCE AND SPACE
A. The investigation of Technological Opportunities and Trends	A.1. Morphological Analysis	Enables systematic investigation of alternative methods of performing a technological function ; does not require numerical information, but does require complete knowledge of technological state of the art, useful at early stages of systems - definition and R&D planning.	Will not give ideas to those unlikely to have them ; does not show costs and benefits of alternative solutions ; can become too complex and costly when made exhaustive.	– Nuclear Reactor Design (UK) – Urban Transportation (UK) – Marine Exploration (UK)
	A.2. Trend Lines and Envelope Curves	Enables assessment of likely developments of technological performance parameters. Together with demand and cost data, can help identify technological opportunities and threats, and performance targets for R&D.	Difficulty in obtaining historical data on trends in technological performance parameters ; in identifying level of stabilisation of a given technology, especially when the contraints are socially, economically or politically determined ; does not enable identification of new families of technologies required to maintain the envelope curve on an upward trend.	
	A.3. Consulting Experts : The Delphi Technique	Enables cheap and systematic review of expert opinion on the likelihood of scientific and technological breakthroughs. Most useful in long term, unstructured problem areas ; reasoning behind expert opinions may be just as important as the opinions themselves.	Great care required in choosing experts ; the statistically "median" opinion may well be wrong ; process of reiteration and convergence of opinions may give the decision maker a false illusion of certainty.	
B. The investigation of Needs to which Technology can Respond	B.1. Extrapolation of Economic, Social and Demographic Trends	Enables general assessment of future needs and opportunities for technological development.	Difficulties in obtaining historical data ; cannot foresee long term effects of radical-technological or social change.	– Marine Exploration (UK) – Desalination (UK)
	B.2. Market or Demand Surveys	Enables collection of information directly relevant to policy problems.	May be costly and time-consuming if operationally useful information is to be collected ; not accurate in reflecting users' reactions to radically new technology.	
	B.3. Demand Models : "Abstract" and Simulated	Abstract models do not require detailed data ; enable identification of critical parameters ; useful at early stage of system development. Simulation models enable more accurate assessment of demand, costs and benefits. Useful at later stage of system development.	Assumptions of abstract models may not reflect reality. Simulation models may require the collection of considerable data, and be expensive and cumbersome. Difficult to include political factors and to predict users' response to radical new technology.	
	B.4. Consulting Experts : The Delphi Technique	Same as A.3. above.	Same as A.3. above ; in addition, dangers of "elitism" and of vagueness.	
C. Investigation of the Interaction Between Technology and Needs	C.1. Cause-Effect Analysis	Enables understanding and evaluation of interactions amongst technology, needs and policy .	Insufficient understanding of fundamentals of interaction amongst technology, society and policy ; costly ; difficult to be accurate beyond a five-year time horizon ; difficult to quantify with precision.	– Experimental Appl'n in Three Sectors (USA)
	C.2 Relevance Trends	Enables systematic examination of alternative lines of action to achieve a given policy objective. Useful at exploratory research stage in ensuring that all possible options have been considered ; in identifying critical parameters.? Enables revision of objectives in the light of technological opportunities and constraints.	Requires understanding of interaction between technology and policy mission. Sometimes used as a method of resource allocation (by assigning weights to various parameters), but this may hide uncertainties and value judgments.	
	C.3 Consulting Experts : Scenarios	Same as A.3. and B.4. above.	Need to spell out assumptions. If thorough, can be costly and time-consuming "Global" scenarios of little operational value.	
	C.4. Demonstration and Experimentation	Enables most accurate assessment of real performance and efforts of a technological system. Most convincing for decision makers.	Expensive and risky.	
Methods of Choice	D.1. Cost/Benefit and Cost/Effectiveness Analysis	Enables a systematic comparison of costs and benefits of given and alternative courses of action. Most useful at later stages of projects and programmes, when data are available. Can identify parameters critical to costs and benefits.	Need for clear definition of what costs and benefits are included and excluded, and for consistency when choosing amongst alternatives. Incommensurability of components and costs and benefits ; reducing these components to monetary units may hide political choice. Difficulty in long term programmes due to changing objectives, and competitive systems, and to sensitivity of the result to the interest rate chosen. Not very useful in fundamental or exploratory programmes with low probability of pay-off, but high pay-off successful. Need to include post-R&D costs in analysis care required to bring in the political and intangible factors at the right time : too early may stifle rigorous analysis, too late may lead to their neglect.	– Oceanography (USA) – Nuclear Energy (USA) – Supersonic Transport Aircraft (USA, G.B., France) – Transport (France) – Production of Energy (France)
	D.2. The Check-list Approach	Recognises importance of judgment and intuition. Serves as a basis from which the needs for more thorough analysis can be identified.	Does not separate important from unimportant factors, not identify interactions and interdependencies.	
Method Implementation	E.1. PERT	Enables the establishment of benchmarks for programme review and evaluation, and the identification of effects of programme changes.	Difficulties of making rigid plans for resource allocation, and the identification of "critical paths" , given the uncertainties of the R&D process.	
Comprehensive Planning	F.1. Planning, Programming and Budgeting System (PPBS)	Enables the mobilisation of analysis in relation to the total process of policy formulation, decision taking and implementation. "Output budgeting" enables greater flexibility via the use of R&D resources. Multi-year planning enables the contribution of R&D to be put in its proper perspective. Explicit consideration of policy objectives requires contribution of R&D to be analysed.	Little empirical evidence on the effects of PPBS on R&D planning. Danger of lack of effective dialogue between PPBS analyst and science policy maker ; of too great an emphasis on "needs" leading to stifling of technological opportunities.	

APPENDIX 3c

FEEDBACK MODEL

(source Jantsch 1967; 243)

Predictions or   Model of Future   Anticipation
Forecasts ─────────────→   Situation ──────────────→   (Data Base)

Transform-   Manipulation of Model   Manipulation of
Methods ─────────────→   of Present Situation   Anticipation

Data Base ─────────────→ Model of Present Situation ◄─────────── Change

ILLUSTRATIVE NORMATIVE – RE-EDUCATIVE CHANGE TECHNIQUES

(Source French and Bell 1973; 33-38, 40)

DIAGNOSING ORGANIZATIONAL SUBSYSTEMS

Diagnostic Focus or Target	Explanation and Identifying Examples	Typical Information Sought	Common Methods of Diagnosis
total organiza- (having a com- "charter" or sion and a com- power struc-)	The total system is the entity assessed and analyzed. The diagnosis might also include, if relevant, extrasystem (environmental) organizations, groups, or forces, such as customers, suppliers, and governmental regulations. Examples are a manufacturing firm, a hospital, a school system, a department store chain, or a church denomination.	What are the norms ("cultural oughts") of the organization? What is the organization's culture? What are the attitudes, opinions, and feelings of system members toward various "cognitive objects" such as compensation, organization goals, supervision, and top management? What is the organization climate—open vs. closed, authoritarian vs. democratic, repressive vs. developmental, trusting vs. suspicious, cooperative vs. competitive? How well do key organizational processes, such as decision making and, goal setting, function? What kind and how effective are the organization's "sensing mechanisms" to monitor internal and external demands? Are organization goals understood and accepted?	Questionnaire surveys are most popular with a large organization. Interviews, both group and individual, are useful for getting detailed information, especially if based on effective sampling techniques. A panel of representative members who are surveyed or interviewed periodically is useful to chart changes over time. Examination of organizational "potsherds"—rules, regulations, policies, symbols of office and/or status, etc., yields insight into the organization's culture. Diagnostic meetings held at various levels within the organization yield a great amount of information in a short time period.
ge subsystems are by nature plex and hetero- ous	This target group stems from making different "slices" of the organization, such as by hierarchical level, function, and geographical location. Two criteria help to identify this set of subsystems: first they are viewed as a subsystem by themselves or others; and second, they are heterogeneous in makeup, that is, the members have some things in common, but many differences from each other, too. Examples would be the middle management group, consisting of managers from diverse functional groups; the personnel department members of an organization that has widely dispersed operations with a personnel group at each location; everyone in one plant in a company that has ten plants; a division made up of several functional groups.	All of the above, plus: how does this subsystem view the whole and vice versa? How do the members of this subsystem get along together? What are the unique demands on this subsystem? Are organization structures and processes related to the unique demands? Are there "high" and "low" subunits within the subsystem in terms of performance? Why? What are the major problems confronting this subsystem and its subunits? Are the subsystem's goals compatible with organization goals? Does the heterogeneity of role demands and functional identity get in the way of effective subsystem performance?	If the subsystems are large or widely dispersed, questionnaire and survey techniques are recommended. Interviews and observations may be used to provide additional supporting or hypothesis testing information.
l subsystems are simple and ely homogene-	These are typically formal work groups or teams that have frequent face-to-face interaction. They may be permanent groups, temporary task forces, or newly constituted groups (e.g., the group charged with the "start-up" of a new operation, or the group formed by an acquisition or merger). Examples are the top management team, any manager and his key subordinates, committees of a permanent or temporary nature, task force teams, the work force in an office, the teachers in a single school, etc.	The questions on culture, climate, attitudes, and feelings are relevant here, plus: What are the major problems of the team? How can team effectiveness be improved? What do people do that gets in the way of others? Are member/leader relations those that are desired? Do individuals know how their jobs relate to group and organizational goals? Are the group's working processes, i.e., the way they get things done as a group, effective? Is good use made of group and individual resources?	Typical methods include the following: individual interviews followed by a group meeting to review the interview data; short questionnaires; observation of staff meetings and other day-to-day operations; and a family group meeting for self-diagnosis.
total organi- that are rela- simple and eneous	An example would be a local professional organization. Typical problems as seen by officers might be declining membership, low attendance, or difficulty in manning special task forces.	How do the officers and the members see the organization and its goals? What do they like and dislike about it? What do they want it to be like? What is the competition like? What significant external forces are impacting on the organization?	Questionnaires or interviews are frequently used. Descriptive adjective questionnaires can be used to obtain a quick reading on the culture, "tone," and health of the organization.
ce or inter- subsystems	These consist of subsets of the total system that contain members of two subsystems, such as a matrix organizational structure requiring an individual or a group to have two reporting lines. But more often this target consists of members of one subsystem having common problems and responsibilities with members of another subsystem. We mean to include subsystems with common problems and responsibilities such as production and maintenance overlaps, marketing and sales overlaps.	How does each subsystem see the other? What problems do the two groups have in working together? In what ways do the subsystems get in each other's way? How can they collaborate to improve the performance of both groups? Are goals, subgoals, areas of authority and responsibility clear? What is the nature of the climate between the groups? What do the members want it to be?	Confrontation meetings between both groups are often the method for data gathering and planning corrective actions. Organization mirroring meeting is used when three or more groups are involved. Interviews of each subsystem followed by a "sharing the data" meeting or observation of interactions can be used.
nd/or Triads	Superior/subordinate pairs, interdependent peers, linking pins—i.e., persons who have multiple group memberships—all these are subsystems worthy of analysis.	What is the quality of the relationship? Do the parties have the necessary skills for task accomplishment? Are they collaborative or competitive? Are they effective as a subsystem? Does the addition of a third party facilitate or inhibit their progress? Are they supportive of each other?	Separate interviews followed by a meeting of the parties to view any discrepancies in the interview data are often used. Checking their perceptions of each other through confrontation situations may be useful. Observation is an important way to assess the dynamic quality of the interaction.

Diagnostic Focus or Target	Explanation and Identifying Examples	Typical Information Sought	Common Methods of Diagnosis
Individuals	Any individual within the organization, such as president, division heads, key occupants of positions in a work flow process, e.g., quality control, R & D. In school systems, this would be (a) students, (b) teachers, or (c) administrators.	Does he perform according to the organization's expectations? How does he view his place and performance? Do certain kinds of problems typically arise? Does he meet standards and norms of the organization? Does he need particular knowledge, skills, or ability? What career development opportunities does he have/want/need? What pain is he experiencing?	Interviews, information derived from diagnostic work team meetings, or problems identified by personnel department are sources of information. Self-assessment growing out of team or subsystem interventions is another source.
Roles	A role is a set of behaviors enacted by a person as a result of his occupying a certain position within the organization. All persons in the organization have roles requiring certain behaviors, such as the secretaries, production foremen, accountants.	Should the role behaviors be added to, subtracted from, or changed? Is the role defined adequately? What is the "fit" between the person and his role? Should the role performer be given special skills and knowledge? Is this the right person for this role?	Usually information comes from observations, interviews, role analysis technique, a team approach to "management by objectives." Career planning activities yield this information as an output.
Between organizations, systems constituting a supra system	An example might be the system of law and order in a region, including local, county, state, federal police or investigative and enforcement agencies, courts, prisons, parole agencies, prosecuting officers and grand juries. Most such supra systems are so complex that change efforts tend to focus on a pair or a trio of subparts.	How do the key people in one segment of the supra system view the whole and the subparts? Are there frictions or incompatibilities between subparts? Are there high-performing and low-performing subunits? Why?	Organizational mirroring, or developing lists of how each group sees each other, is a common method of joint diagnosis. Questionnaires and interviews are useful in extensive, long range interventions.

DIAGNOSING ORGANIZATIONAL PROCESSES

Organizational Process	Identifying Remarks and Explanation	Typical Information Sought	Common Methods of Diagnosis
Communications patterns, styles and	Who talks to whom, for how long, about what? Who initiates the interaction? Is it two-way or one-way? Is it top-down; down-up; lateral?	Is communication directed upward, downward, or both? Are communications filtered? Why? In what way? Do communications patterns "fit" the nature of the jobs to be accomplished? What is the "climate" of communications? What is the place of written communications vs. verbal?	Observations, especially in meetings; questionnaires for large-size samples; interviews and discussions with group members—all these methods may be used to collect the desired information.
Goal setting	Setting task objectives and determining criteria to measure accomplishment of the objectives takes place at all organizational levels.	Do they set goals? How is this done? Who participates in goal setting? Do they possess the necessary skills for effective goal setting? Are they able to set long-range and short-range objectives?	Questionnaires, interviews, and observation all afford ways of assessing goal-setting ability of individuals and groups within the organization.
Decision making, problem solving, and planning	Evaluating alternatives and choosing a plan of action are an integral and central function for most organization members. This includes getting the necessary information, establishing priorities, evaluating alternatives, and choosing one alternative over all others.	Who makes decisions? Are they effective? Are all available resources utilized? Are additional decision-making skills needed? Are additional problem-solving skills needed? Are organization members satisfied with the problem-solving and decision-making processes?	Observation of problem-solving meetings at various organizational levels is particularly valuable in diagnosing this process.
Conflict resolution management	Conflict—interpersonal, intrapersonal, and intergroup—frequently exists in organizations. Does the organization have effective ways of dealing with conflict?	Where does conflict exist? Who are the involved parties? How is it being managed? What are the system norms for dealing with conflict? Does the reward system promote conflict?	Interviews, third-party observations, and observation of group meetings are common methods for diagnosing these processes.
Group interface	Interfaces represent those situations wherein two or more groups (subsystems) face common problems or overlapping responsibility. This is most often seen when members of two separate groups are interdependently related in achieving an objective but have separate accountability.	What is the nature of the relations between the two groups? Are goals clear? Is responsibility clear? What major problems do the two groups face?	Interviews, third party observations, and observation of group meetings are common methods for diagnosing these processes.
Superior-subordinate	Formal hierarchical relations in organizations dictate that some people lead and others follow; these situations are often a source of many organizational problems.	What are the extant leadership styles? What problems arise between superiors and subordinates?	Questionnaires can show overall leadership climate and norms. Interviews and questionnaires reveal the desired leadership behaviors.

APPENDIX 5

FORMATION AND TERMS OF REFERENCE FOR THE CFF

(Source CFF report CFFRI/77)

The Commission for the Future (CFF) was established by the
Government in August 1976. Announcing the formation of the
CFF, the Deputy Prime Minister (Hon B. E. Talboys) said that
the Government attached great importance to the CFF, believing —

> that the complexity of modern living, the frequently
> unforeseen impact of present decisions and developing
> technology, and the need to ensure that human values and
> aspirations are not overlooked, require a detached long
> term look at the possible directions in which New Zealand
> could be heading and the choices for the future open to us.

The Commission's Terms of Reference appears at Annex A.
Although the Commission is focussing on the period 5-25 years
ahead, its functions are intended to be complementary to those
of the recently established New Zealand Planning Council (chaired
by Sir Frank Holmes) with which it is establishing close working
relations. In this it is assisted *inter alia* by Dr R.O.H. Irvine's
membership of both bodies. Legislation to cover the status and
functions of the Commission is to be introduced during 1977.

The Government named nine people as members of the Commission.
Their backgrounds reflect a wide variety of interests and
experience. The Commission is a bi-partisan body.

The Government had indicated to the Commission that one of
its first projects might be to define those areas which most
urgently required
study. It was suggested that these might include New Zealand's
population patterns and projections, and social development in
New Zealand's multi-cultural society. The Commission has decided
that it should study not only these subjects, but also *inter alia*

COMMISSION FOR THE FUTURE:
TERMS OF REFERENCE

1. To consult with Departments of State, the NDC planning organisation (including its Councils and Committees) and such other instruments of State, professional and amateur associations and other organisations to the long term development of New Zealand of:-

   (a) present policies and decisions;

   (b) new world developments especially in technology

   (c) the possibility of world catastrophic events.

2. To make information on the above topics publicly available by issuing reports and in other suitable ways.

3. To initiate public discussion on the reports the Commission issues by press comment and by arranging meetings for suitable members of State Departments, NDC sectors, industry, other organisations and the general public.

4. To ensure that Members of Parliament and in particular, appropriate select committees, have opportunities of informing themselves of the issues raised in the Commission's reports and other areas within the Commission's responsibility especially immediately before they are to be debated in the House.

5. In consultation with the Parliamentary Counsel Office to draft legislation for establishing the commission by Act of Parliament, to be introduced as a bill in 1977.

6. To advise Government on the administrative and financial arrangements necessary to establish the Commission on a permanent basis.

7. To report progress through the Chairman of the Commission to the Ministers of National Development, Science, and Broadcasting, as appropriate.

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