

CHOMSKY ON EDUCATION

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TABLE OF CONTENTS

Abstract	4	
Introduction	6	
 <u>PART ONE</u> : "NOAM CHOMSKY AND CONTEMPORARY ATTITUDES TO LANGUAGE"		
- A Brief Overview	10	
Reference Notes and Bibliography ; Part One	18	
 <u>PART TWO</u> : "LANGUAGE AND MIND" to "AMERICAN POWER..."		20
2.1 <u>Language and Mind</u>	22	
2.2 <u>American Power and the New Mandarins</u>	30	
2.3 <u>Relevant Published Papers 1968-1969</u>	39	
 <u>PART THREE</u> : "AT WAR..." to "PROBLEMS..."		42
3.1 <u>At War With Asia</u>	44	
3.2 <u>Problems of Knowledge and Freedom</u>	54	
3.3 <u>Relevant Published Papers 1970 - 1972</u>	60	

ERRATA

1. Table of Contents
 Appendix - Extracted for Extrapolated.
2. Abstract
 1.24 Extracted for Extrapolated.
3. Introduction page 3
 1.28 Extracted for Extrapolated.
4. Appendix page 134
 heading Extracted for Extrapolated.

<u>PART FOUR</u>	:	"FOR REASONS OF STATE" to "REFLECTIONS..."	66
4.1		<u>For Reasons of State</u>	68
4.2		<u>Counter-Revolutionary Violence</u>	140
4.3		<u>Peace in the Middle East?</u>	80
4.4		<u>Logical Structure of Linguistic Theory</u>	143
4.5		<u>Reflections On Language</u>	82
4.6		<u>Relevant Published Papers 1973 - 1976</u>	92

<u>PART FIVE</u>	:	"CHOMSKY ON EDUCATION" - A Collation of Attitudes	104
5.1		The Nature of Education	106
5.2		Native Language Education	107
5.3		Second Language Education	109
5.4		Education for Work - Further Education	111
5.5		University and Higher Education	113
5.6		Education in Developing Countries and Education for Liberation	115
5.7		Educational Psychology	116
5.8		Political Education	118
5.9		Curriculum Design and Methodology	120
5.10		Educational Policies	122
5.11		Educational Philosophy	123
5.12		The Congruity and Genesis of Chomsky on Education	125
		Reference Notes: Part Five	130
		Appendix; Extrapolated Incidental References	132
		Bibliography	148

ABSTRACT

There are no published books by Noam Chomsky which concern themselves with education or which are written with educationists in mind as the intended and specific audience. Of his many published articles, only one short paper deals specifically with some of his views on education, and, even here, mainly in the general philosophical terms of the humanistic conception of education. Yet Chomsky's influence on courses of teacher training and on the teaching of language, by any standard, is immense. At the same time it would be reasonable to assume that the classroom teacher has only a vague impression of Chomsky's significance for education.

What are his attitudes towards those areas of education to which he has directly contributed? To what other areas has he turned his attention and how has he attempted to influence them indirectly through his writings? To what extent do his published writings reveal his attitudes toward pedagogy? Is his philosophy of education clearly and cogently revealed in his works? What can be deduced about his attitudes to the "institution" (in a sociological sense) of education? Are his attitudes consistent and do they have a common source?

This study explores each text and published paper of Chomsky, from his most productive and diversified period, in order to extrapolate all references to *education*, as defined within certain narrow and exclusive limits. The period selected, the method of extrapolation and the definitive boundaries applied, are discussed more fully in the INTRODUCTION which follows.

From each extrapolated reference, wherever it is more than incidental, and from its context, inferences are made which comment upon and try to reveal Chomsky's attitudes to *education*, as it is narrowly and exclusively defined in the INTRODUCTION.

Part One of the study briefly describes Chomsky's place in that disciplinary area where he has made his most notable contributions; theoretical linguistics and linguistic philosophy. Each of Parts Two, Three and Four deals with a chronological period, extrapolating references from all the published works which have relevance in the terms of this study. Part Five collates and categorises the many attitudes inferred and discussed in Parts Two to Four.

INTRODUCTION

Language and Mind, published in 1968, stands as a watershed in the published writings of Noam Chomsky. According to George Steiner *Language and Mind* "represents a summary of generative linguistics and a program for future work" ("Tongues of Men", an extract from *Extra-territorial-Papers on Literature and the Language Revolution*). For these reasons, this book and 1968 have been chosen as the beginning point for this study. *Reflections On Language*, published in 1976, marks the endpoint of the period covered, a suitable climax since this recent book deals with many of the issues raised in *Language and Mind* and concentrates, as did the latter in its revised form, on both theoretical linguistics and philosophy of language.

Prior to *Language and Mind*, Chomsky's six published books from *Syntactic Structures* to *Sound Pattern of English* are relatively homogeneous in subject matter. They deal, in the main, with theoretical linguistics and linguistic philosophy, as do his published articles from this period. In the nine year period from 1968 to 1976 however, Chomsky's range of published commentaries expanded radically and his output increased commensurately.

Of the eleven titles published during this period, two deal specifically with theoretical linguistics, three with the philosophy of language, linguistics and general philosophical themes, one with the Middle East and international affairs, and five with American foreign policy, particularly in relation to the Vietnam War. Of the twentyeight articles published between 1968 and 1976, only eleven deal with subjects strictly relevant to Chomsky's academic disciplines. The remainder cover topics of national and international affairs and, matching the inclination of six of the relevant books, are strongly polemical in tone.

The works from the period selected, then, reveal Chomsky as an intellectual, an educationist, a citizen of the world and a polemicist. They seem to offer the range of comment required for such a study as this. The reader can gauge from the study itself how wide and detailed is the relevant information resident in the works used.

The study extrapolates and makes deductions from all and any references

to *education* in the published works of the period. The following narrow and exclusive limits control the selection of citations for extrapolation. For the purposes of this study, *education* refers to the specific social act of one relatively active, purposeful individual or collectivity of such individuals engaging specifically in the training, instruction or teaching of another relatively passive individual or collectivity of such individuals. This narrow and exclusive definition only admits into consideration, within the study, references made by Chomsky, or quoted by him, which include one or other of the following words or words cognate to the following words: "education", "training", "instruction", "teaching". This definition excludes references which contain literary or metaphorical terms which could be synonymous with the above ("nourish", "graft" or "enlighten", for example), which are of a type not used by Chomsky in any case. More particularly, this definition excludes any reference which centres on the word "learn" or on one of its cognate forms, since, while the 'activeness' or 'passiveness' of the activity described by this word is a central point of issue in Chomsky's work, his use of the word "learn" in general is not strictly relevant to the words teach, instruct, educate or train. As well any reference to one of the four above-mentioned words (or cognate words) is ignored if, in a semantic sense, its *form* rather than its *meaning* is stressed.

A simple method is used for treating each citation, or, in many cases, a number of citations treated collectively. There are four steps in this method:

- (a) cite as a reference by underlining the word or phrase as part of its sentence (several sentences in many instances), editing passages where necessary for reasons of space.
- (b) set the reference within its textual context by quoting its Chapter heading, page, article or number.
- (c) set the reference within its sense context by concisely explaining what Chomsky is discussing when he refers to the cited word or phrase and how it relates to his argument.
- (d) deduce, if possible, what the reference and its context reveal about Chomsky's attitudes to *education*, as it is narrowly and exclusively defined above.

Many citations are incidental to the purpose of this study. These

have been removed from the body of the text to an appendix. They are indicated by the phrase INCIDENTAL REFERENCE ONLY appearing at (c) or sometimes (d). This phrase indicates that the citation is trivial, superfluous or incidental. Usually there is no sense context delineated for these references, unless they happen to be used in a quotation by Chomsky, in which case the source of the quote is routinely identified. There are, of course, no deductions at (d) for these incidental references.

Part Five collates and categorises the many attitudes deduced, under headings which are helpful for appreciating the range of Chomsky's comment and the relevance and coherency of his views. These interpretations in summary are referenced by footnote back to their primary sources.

Two facts which this work well illustrates are that Chomsky's intellectual interests are diverse and that they lead him to consider education from many different angles. It is necessary here to draw attention to an important and concluding section in Part Five of the study entitled "The Congruity and Genesis of Chomsky On Education." This key section offers attempted answers to questions which go beyond the assembling of inferred attitudes. The section discusses the internal consistency of Chomsky's views in an effort to trace them back to some common source, if possible, or to show inconsistency if necessary. It also examines Chomsky's views on education as revealed in his polemical writings and compares them with the implications he has drawn for education as a result of his more formal and more publicly reasoned academic work on language.

A comment on the suitability of the approach and of the methodology used is appropriate here. Of the 322 citations identified and extrapolated no less than 276 were valuable for providing inferential material. Of these 62 re-covered similar ground to others, but still added weight to deductions and demonstrated Chomsky's attitudinal consistency. Only 46 *incidental references* were extrapolated. Furthermore, the success of the terminological constraints employed was apparent during the course of extrapolation, since no major section in the many books and articles covered, giving worthwhile insights into Chomsky's attitudes to education, was by-passed on the grounds that it could not be discussed within the conceptual limits of the study. This remarkable fact is a tribute to the exactitude of Chomsky's language use. The method suits Chomsky, but it could not be recommended as an approach for analysing the works of all writers!

The Bibliography includes an introductory note explaining some features of classification peculiar to it. Part One, which gives some brief background to Chomsky's contributions within his academic discipline, has its own Bibliography included as part of its Reference Notes on page 18. This section is intended to stand apart. The rest of the work deals with primary sources only.

PART ONE

"NOAM CHOMSKY AND CONTEMPORARY

ATTITUDES TO LANGUAGE"

- A BRIEF OVERVIEW

- 1.1 It would seem that since his celebrated review of B.F. Skinner's *Verbal Behaviour* in 1959,¹ in which he claimed that the behaviourists' impressive panoply of scientific terminology and statistics was no more than camouflage, covering up their inability to account for the fact that language simply is not a set of habits, Chomsky's point of view on the nature of language acquisition has become progressively the general attitude on the matter. The major point which flows from his rebuttal of the behaviourists' approach to explaining the manner of language acquisition is "that there are apparently deep-seated and rather abstract principles of a very general nature that determine the form and interpretation of sentences" and that "it is reasonable to formulate the empirical hypothesis that such principles are language universals."^{1a} The modern attitude is clear, according to Lyons, who claims that "what his theory of generative grammar seeks to formalise - rule-governed, structure-dependent, creativity whose complexity is defined by the power of the grammar - is certainly an essential part of language."² Moreover Chomsky has given more than good reason to believe that the model of stimulus-response is incapable of accounting for all facets of language behaviour. When Chomsky says that the grammar of a particular language is a system of rules and principles that links sound with meaning, he is taking for granted the native speaker's ability to perform another kind of interpretation, by means of which the phonetic representations are converted into sound and the semantic representations into meaning. The missing links are supplied by the more general theory of grammar which Chomsky refers to as "universal grammar". It is by virtue of his knowledge of universal grammar that the speaker of a natural language is held to be able to interpret the phonetic and semantic representations. What follows is an analysis of contemporary attitudes to Chomsky's theory of grammar which has been undoubtedly the most dynamic and influential and in relation to which every other school of linguistics tends to define its position on particular issues. The modern attitudes will be explored under three headings: phonology, syntax and semantics.
- 1.2 Phonology, which deals with the sounds of language and the notion that sentences can be represented as sequences of phonemes, is seen as crucial to any modern theory of grammar.

Chomsky allows the possibility that it may become clear that the principles of phonology are considerably more sophisticated and intricate than those of semantics and that phonology may become a far deeper theory than the already profound theories of semantics.³ Elsewhere he notes⁴ that the study of language, since the pioneering work of Ferdinand de Saussure, has revealed that the sounds of language enter into systematic relations in accordance with restrictive principles. It is in the domain of mapping abstract sound patterns in accordance with ordered rules of a narrowly defined type to produce a physical structure unlike the underlying mental representation, that recent studies have yielded clarity of insight.

As the method of entry into the encoder's message, phonologic structure must be analysed first and links found with syntax. In general the relation between phonology and semantics is indirect, being mediated by syntax, but two areas reveal more direct links. These are contrastive stress and sound symbolism, according to Lyons⁵.

The most recent attempt at a grammatically oriented phonology known as generative phonology, owes much to Sapir, as is expressly indicated by its leading proponents, Noam Chomsky and Morris Halle.⁶ This extends the parallelism between semantics and syntax also to phonology. The theory has been guided by the principle of a set of rules connecting deep phonology (or "phonological representation") with surface phonology (or "phonetic representation"). The link between the two representations - phonological and phonetic - is established by a set of rules which operate in a fixed order, adding, deleting or modifying distinctive features. According to Chomsky:

These rules fall into various categories and exhibit invariant properties that are by no means necessary for a system of thought or communication...⁷

For example it is held⁸ that there is a fixed set of up to twenty distinctive features of phonology, and that, while not all of these will be found in the phonemes of all languages, every language will make its own selection from the various possible combinations. Chomsky has called these phonological elements the "substantive universals" of linguistic theory, a name applied also to their syntactic and semantic equivalents.

In this area at least Chomsky reveals his training in the Bloomfieldian school of linguistics, against which, on most issues, he reacted. The Bloomfieldian view on this issue differs from the Chomskyan only in attitude, not substance. Bloomfield and his disciples, following the example of Boas, stressed the diversity of human languages, while Chomsky emphasises their similarities. At the same time, however, (and this draws them together) he admits that "universals" may be absent in some one or other of very many quite familiar languages. It is relevant to point out here that Chomsky in his attitudes towards language owes much to Sapir who took a more humanistic view of language, laying great stress on its cultural importance, and on the fact that language is 'purely human' and 'non instinctive'.⁹

1.3

Contemporary and stable attitudes to Syntax are hard to identify since this area of language is infected with a dynamic only rivalled by Semantics. To describe Chomskyan attitudes in this area is not enough since the post-Chomskyan variants are more than subtle in the range of their diversity.

In *Syntactic Structures* in 1957 Chomsky introduced the tool "transformational grammar" which has as one of its major advantages the capacity to enable us to relate superficially distinct sentences and distinguish superficially identical sentences. This contrasted with "phrase structure grammar" by being more simple (according to Chomsky) since it uses relatively few but more complex rules, while phrase structure has many more and less complex rules. Developing and refining transformational grammar Chomsky made a number of modifications in 1965 in his standard theory in *Aspects of the Theory of Syntax*. Here he sees grammar in its widest sense to consist of three levels and three set rules; the phonological, the syntactic and the semantic. To the point in this discussion, the syntactic rules "generate" the sentences of the language and there is an independent level of syntactic deep structure. This very complex system includes rules of the base and transformations, the former generating the deep structures. The transformational rules are therefore "interpretive". To summarise, at this stage syntax is an independent part of a linguistic description, divided into deep and surface structures with the former providing the exclusive basis for semantic interpretation, the next stage in the three tiered description.

Since 1965 a range of "grammars" has appeared, the most distinctively post-Chomskyan challenge to Chomsky's standard theory coming from "case grammar", which owes much of its inspiration no doubt to the morphological study of inflected languages such as Latin and Greek. It relates the inflected postpositions of some languages with the prepositions of others (e.g. English), giving the verb its proper place of importance in the sentence. The verb governs a set of obligatory or deep structure cases which are filled by expressions that may occur as subjects, objects or prepositional phrases at a more superficial level. "Case grammar" has a number of attractions such as its identifiability across languages, its psychological relation to the acquisition of language by children and its semantic relevance, however it is not seen as a viable alternative to the standard theory. Next in importance "valency grammars", which have been more extensively discussed in Germany and Russia, again centre on the verb as the governing element which determines the range and type of its dependent expressions. "Relational grammar" attaches importance to the grammatical relations of being subject, object or indirect object of the sentence, and is concerned with transformational correspondence between active and passive sentences. According to Lyons¹⁰ it has not yet (1977) been widely exemplified in the published literature.

Chomsky's "extended standard theory" has been in a state of continuous development for the last ten years. In his 1976 published work, *Reflections on Language*, Chomsky does much more than analyse and describe his developing grammar. He looks at the controversies among and between psychologists, philosophers and linguists, the interaction of language with mental organs, and he suggests once again that the conception of man as totally malleable is a false and dangerous one. In relation to syntax, words are allocated a deep structure representation distinct from their semantic representation, as in his standard theory, but no longer does he see only the deep structure of the sentence as relevant to the determination of its semantic representation.¹¹ Now, as well, surface structures contribute in a definite way to semantic interpretation:

In this theory then the syntactic and semantic properties of the former 'deep structures' are dissociated. Either class of properties might, then, be taken as defining the technical notion 'deep structure'¹² ... we must now understand the terms "basic structure" and "deep grammar" to refer to non-superficial aspects of surface structure, the rules that generate surface structures, the abstract level of initial phrase markers, the principles that govern the organisation of grammar and that relate surface structure to semantic representations, and so on.¹³

1.4

Writing in 1964 F. H. George described Semantics as being "at the crossroads".¹⁴ In the next 10 years there was a move away from a view of semantics as "a messy, largely unstructured intellectual no-man's land on the fringes of linguistics, and a tendency to accord to it a more and more central position in linguistic studies."¹⁵

That Semantics was ignored for so long as an area of legitimate linguistic enquiry was due largely to the influence of Bloomfield in the 1930's. His view was that the analysis of meaning was the "weak point in language study." Bloomfield in 1933, and another structural linguist, Harris in 1951, did not see semantics as part of a linguistic description, although the former showed distinct interest in the area, devoting two full chapters in his *Language* to the topic and almost contradicting his stated view when he claimed "to study this coordination of certain sounds with certain meanings is to study language."¹⁶

Bloomfield and Harris in this area also influenced Chomsky's early work. In his earliest published version of transformational grammar, *Syntactic Structures* meaning was in effect ignored and the independence of form and meaning was maintained. Following Katz and Fodor in *The Structure of a Semantic Theory* in 1963 the history of transformational grammar has been broadly a matter of conceding to semantics a more and more important position in linguistic theory. Katz' paper, *Semantic Theory*,¹⁷ restates this position, which has as its lower bound that a semantic theory is determined by examining those abilities or capacities which all fluent speakers of a language share and which cannot be accounted for by the syntactic component alone. This procedure is based on the assumption that "synchronic linguistic description minus semantics equals grammar."

Katz and Postal, in 1964, introduced the assumption that singular transformations do not change meaning. With Chomsky in 1965, they regard semantics as interpretive and that this interpretation is based exclusively on deep structure via projection rules in the same way as phonetic interpretation is based on surface structure via phonological rules. Thus there is left a symmetrical model of the grammar with the transformational rules operating between the deep and surface structure.

The position of Generative Semantics falls within the last and most modern period of generative-transformational theory. Lakoff, Fillmore and McCawley propose quite drastic revisions of Chomsky's 1965 model by declaring that the deep structure of a sentence is so deep as to be identical with its semantic representation. This now means that the base component, in Chomsky's 1965 sense, is no longer syntactic but semantic and that projection rules are no longer needed.¹⁸ Chomsky's view, the interpretive one, now seems to occupy a minority position in regard to these issues. According to Leech the strongest arguments on both the interpretive and generative sides have been arguments against the rival position, rather than in favour of their own. He advocates a compromise position of deep and surface semantics, deep and surface syntax and deep and surface phonology with transformational rules operating at each level. This model he calls "Generative Semantics with Deep Syntactic Structure", and his arguments for it, while too detailed to go into here, are compelling.

While the debate is far from concluded it would seem that Chomsky's recent position (1976) is approaching that of his rivals:

There is a wide-spread feeling that semantics is that part of language that is really deep and important, and that the study of language is interesting primarily insofar as it contributes to some understanding of those questions of real profundity...there is some merit to this view.¹⁹

REFERENCE NOTES AND BIBLIOGRAPHY: PART ONE

- 1 "Review of B.F. Skinner, *Verbal Behaviour*" Language 35, (1959) 26-58
- 1a Chomsky, Noam Problems of Knowledge and Freedom Fontana 1972, page 40
2. Lyons, John Chomsky Fontana Modern Masters 1977, page 145
3. Lyons, op.cit. page 103
4. Chomsky, op. cit. page 28
5. Lyons, John (ed) New Horizons in Linguistics Pelican 1970, page 94
6. Chomsky and Halle The Sound Pattern of English N.Y., 1968 page 76
7. Chomsky, Problems... page 29
8. Lyons, Chomsky page 128
9. IBID page 30
10. IBID page 90
11. Chomsky, Reflections On Language Temple Smith 1976, page 81-82
12. IBID page 82
13. IBID page 84
14. George, F.H. Semantics E.U.P. 1964, page 165
15. Leech, Geoffrey Semantics Pelican 1974, page ~~X~~
16. Steinberg and Jakobovits Semantics C.U.P. 1971, page 168
17. IBID page 297
18. Leech, op. cit. page 330; and Steinberg op. cit. page 176
19. Chomsky, Reflections... page 82

PART TWO

"LANGUAGE AND MIND" TO "AMERICAN POWER..."

2.1 LANGUAGE AND MIND (1968, enlarged 1972)
- Harcourt Brace Jovanovich

2.1.1.

(a) This disability, says Huarte, "resembles that of Eunuchs, incapable of generation". Under these sad circumstances, in which the intelligence can only receive stimuli transmitted by sense and associate them with one another, true education is of course impossible, since the ideas and principles that permit the growth of knowledge and understanding are lacking.

(b) Chapter "Linguistic Contributions : Past" page 10.

(c) Chomsky outlines the historical roots of linguistic theory, beginning in the late sixteenth century with the Spanish physician Juan Huarte. Huarte distinguishes three levels of wit; docile wit, normal human intelligence and creative imagination which surpasses normal intelligence. To have one's wit confined to the lowest of these, docile wit, is a serious disability since it is constrained by empiricist principles and makes the acquisition and demonstration of language impossible, even under the most diverse of stimuli.

(d) This reference of Chomsky (and presumably of Huarte as well) to "true education" argues that, for it to occur, a higher level of intelligence than simply docile wit is needed. "True education" excludes the beasts and any human or animal creature which can only associate stimulus with response. "True education" requires students who, assisted by the catalyst of the subject alone, can produce a range of independently devised and novel associations because their intelligence is capable of generating new thoughts which are expressed in a form quite distinct from any training or experience. For education to occur, ideas and principles, not provided by training, must be resident in the intellect. In relation to language, only those equipped beyond docile wit can be excited "to bring forth anything". It can be concluded that only education which takes cognizance of the innate capacities of the wit can be described as "true education".

2.1.2.

(a) A largely irrational objection to explanatory theories as such has made it difficult for modern linguistics to appreciate what was actually at stake in these developments and has led to a confusion of philosophical grammar with the effort to teach better manners to a rising middle class.

- (b) Chapter "Linguistic Contributions : Past" page 15
- (c) "Philosophical grammar", as the first really important general theory of linguistic structure, is under discussion. Chomsky mentions a number of modern distorted references and misinterpretations of this seventeenth century development. He seeks to rebut the charge of "prescriptivism" which was wrongly laid against philosophical grammar. Part of this charge was that its aim was merely to educate people to speak in an acceptable manner. Its true function is comparable to current generative grammar and other grammars which combine a deep and surface structure.
- (d) It may be possible to infer, from this rather incidental reference, a Chomskyan view that there is no place in general education for the teaching of aspects of generative grammar, since he points out its connections with philosophical grammar and refutes the slight that the latter was merely associated in its day with public education. This is contrary to modern erroneous claims that it was used to introduce socially mobile folk into the linguistic conventions and other folkways of the upper class. Chomsky does not cite the source of these erroneous claims. ...

2.1.3.

- (a) Insofar as behavioural psychology has been applied to education or therapy, it has correspondingly limited itself to this concept of "what is learned".
- (b) Chapter "Linguistic Contributions : Future" page 72.
- (c) Chomsky argues that linguistic competence, which he defines as knowledge of a language, must be seen as an abstract arrangement underlying behaviour, consisting of rules which determine the form and intrinsic meaning of an infinity of sentences. The system which these rules combine to form is a generative grammar. There are many such grammars and they include idiosyncratic elements and other general universal elements. He discusses here potential areas of research, across disciplines, in the study of a generative grammar. Psychology, seen in its behavioural form, lacks a notion comparable with "competence"

as he defines it, since this is outside the conceptual bounds of behaviourist psychology. This limits its application to education to investigations into S-R and operant reflexes, associations and dispositions; the concrete and simple rather than the complex and abstract. He recommends future concentration in psychology on this conceptual gap.

- (d) This reference relates only indirectly to education, since Chomsky's exhortation is to "psychology as a discipline", referring here only to the potential, applied value of such a redirection of interest towards education. Clearly he anticipates some benefits accruing to education if a system of underlying competence is elaborated in the language domain of human intelligence via psychological research. It is not possible at this point to identify those benefits.

2.1.4. and 2.1.5.

(a) "That this performance is not usually acquired without special training is attested to by many grammar school teachers. One may even speak quite grammatically without having literally learned the rules of grammar".

- (b) Chapter "Linguistic Contributions : Future" page 72 N.5.

- (c) This quotation is part of a gobbet taken from an article by W.M. Wiest entitled "Recent Criticisms of Behaviourism and Learning". Chomsky uses the extract to demonstrate his point, made in 2.1.3. above, that there is a conceptual lacuna in psychological theory, since clearly Wiest has not or cannot come to grips with the conception of another sense in which the rules of grammar are learned. Indirectly here Chomsky seeks to show that performance does not depend upon an ability to articulate the rules of grammar. Articulation of the rules usually does require special training, as teachers confirm. What Wiest fails to see is that to speak grammatically rarely requires training.

- (d) Chomsky's critical attitude towards a principal aim in the teaching of formal grammar, namely to improve speech performance, is revealed here with some emphasis. His attitude to this area of the curriculum, whose fortunes rise and fall, is that it should not, indeed cannot, be seen as of any more value to the student's practical spoken language

than to confirm the knowledge he already has prior to being trained in the articulation of the rules. If the ability to utter the rules of grammar is discerned as a desirable aim of education, then, in relation at least to speech performance, it is only a desirable aim for its own sake.

2.1.6.

(a) Consider first the problem of second-language acquisition. In what I understand to be Goodman's view, second-language acquisition poses no problem, since "once one language is available and can be used for giving explanation and instruction, the limitations [determined by an innate schematism] are transcended".

(b) Chapter "Linguistics and Philosophy" pages 173-174.

(c) Chomsky is considering some of the critical analyses of his point of view in the matter of the relevance of linguistics to philosophy. He singles out Nelson Goodman's criticism as worthy of strong counterattack, especially and specifically in relation to the question of the acquisition of knowledge in the learning of a second language. In this extract he quotes Goodman in order to demonstrate later that Goodman's word "limitation" (sic) in this formulation is quite inappropriate.

(d) Attitudes to instruction in second-language acquisition are better demonstrated through discussion on the following references (2.1.7. to 2.1.11.)

2.1.7. to 2.1.11.

(a) More serious, it must be recognised that one does not learn the grammatical structure of a second language through "explanation and instruction", beyond the most elementary rudiments, for the simple reason that no one has enough explicit knowledge about this structure to provide explanation and instruction. For example, consider the property of nominalization in English noted earlier, namely that a certain class of nominal expressions corresponds only to deep and not surface structures. The person who has learned English as a second language well enough to make the judgements illustrated by examples 1-10 has not acquired this knowledge,

through "explanation and instruction". Until quite recently, no one, to my knowledge, was aware of this phenomenon; the second language learner, like the first language learner, has somehow established the facts for himself, without explanation or instruction. Again the example is quite typical. Only a trivial part of the knowledge that the second-language learner acquires is presented to him by direct instruction.

- (b) Chapter "Linguistics and Philosophy" pages 174-175.
- (c) Pursuing his counter-criticism of Goodman's criticism (see 2.1.6.) Chomsky here demonstrates the difficulty which Goodman overlooks in claiming that knowledge of one language can be used for giving instruction in another. What can be transferred via second language instruction are the relatively basic grammatical features manifested in surface structure and not the relatively elusive features related to deep structure and related to the transformations which operate upon deep structure to produce surface structure. He refers back to paradigmatic sentences on pages 161-166 to demonstrate his point. Using these sentences he has already demonstrated that a native speaker of English is able to characterize quite readily the class of sentences to which there correspond nominal phrases, i.e. sentences whose main verb can be replaced by a corresponding abstract substantive and still retain the status of a grammatically acceptable phrase which preserves in its surface structure most of the sense of the original. An ability to discern this nominalization property cannot be acquired through second-language instruction. Only a native speaker or a second-language learner immersed and experienced in a language can discern this property. There would seem to be little significant difference between the answer to the problem of explaining first language acquisition and the answer to the problem of explaining how a second-language learner moves from elementary surface structure knowledge to high level fluency in his second language. Thus Goodman's distinction between the two learning operations involved is for Chomsky an inaccurate one, although a distinction may still exist.
- (d) This argument and rebuttal has very pronounced implications for foreign language teaching. While understating the implications involved, Chomsky cogently proposes that only the barest introduction to the grammatical structure of a second language can be offered using the arts of the pedagogue. What he suggests is that a linguistic competence

(see 2.1.3. above), which is innate in all humans, may well explain the proficient learning of a second-language in spite of the efforts of teachers, not because of them. From this, various deductions can be made which are best framed in the form of questions: Is there value in classroom approaches to foreign language teaching which never progress beyond a consideration of surface structure? Should language teaching be abandoned, after an elementary introduction, if there are no opportunities for students to immerse themselves with continuity and diversity in the language? To what extent can a language be acquired in isolation from the culture which shapes it? Does the culture, which includes the language as one of its cultural traits, play any part in elaborating the competence relevant to the language (i.e. the idiosyncratic elements which may not be found in the native language of the second-language learner)? Should discussions and investigations of the generative grammar of second languages form an intrinsic part of second-language teaching? Are some teachers of foreign languages, who themselves have a grasp of their teaching language only at the surface structure level, unwittingly impairing the second-language acquisition of their students? Are second languages most effectively learned by children passing through that same critical period early in childhood (between 1 and 4?) where competence in the first language is developing?

2.1.12. and 2.1.13.

(a) There is, furthermore, a non sequitur in Goodman's discussion of first - and second - language acquisition on the grounds that it is possible to use the first language for explanation and instruction. He then goes on to argue that "acquisition of an initial language is acquisition of a secondary symbolic system", and is hence quite on a par with second-language acquisition. The primary symbolic systems he has in mind are "rudimentary prelinguistic symbolic systems in which gestures and sensory and perceptual occurrences of all sorts function as signs." But evidently these systems, whatever they may be, cannot "be used for giving explanation and instruction" *in the way in which a first language can be used in second-language acquisition*. Consequently, even on his own grounds, Goodman's argument is incoherent.

(b) Chapter "Linguistics and Philosophy" page 176.

- (c) Still dealing with Goodman's criticism, in this necessarily long extract, Chomsky points up an obvious incoherency in Goodman's discussion. He uses a neat and logical argument for rebuttal which is too concise to summarise here without redundancy.
- (d) The extract reveals something of Goodman's attitude to language acquisition and indirectly to education, but nothing of Chomsky's.

2.1.14.

- (a) Suppose that Putnam were correct in believing that "certainly 600 hours [of direct method instruction] will enable any adult to speak and read a foreign language with ease".
- (b) Chapter "Linguistics and Philosophy" page 183.
- (c) Chomsky turns from Goodman to deal with Hilary Putnam, another critic who bases his criticisms on a belief that behaviourism can conceptually accommodate the seemingly incompatible intricacies of transformational grammar and the abstractions of linguistic universals. Chomsky's main rebuttal is to demonstrate that Putnam oversimplifies and underestimates the richness of structure that must be accounted for by any language acquisition model. In this gobble he interpolates the relevant phrase for this discussion in order to amplify the meaning of his quotation from Putnam, a quotation which demonstrates Putnam's belief in the relative ease of language acquisition. Chomsky argues that this apparent rather than real "empirical and factual" example explains nothing about the ease of language acquisition, since the data transmitted in 600 hours is insignificant compared with the language performance the "trained" student is capable of. Underlying and innate competence is much more important than the hours of direct method instruction in contributing to a graduate's performance.
- (d) There is a slight chink in Chomsky's armour here. Although this reference mainly traverses the ground covered in 2.1.7. to 2.1.11. above, by citing Putnam's example Chomsky admits the obvious, and for education the obvious needs to be stated : in second-language learning "competence" is not enough on its own. If there is no rich and incidental exposure to a language available, then direct teaching is necessary if the

student's competence is to be prompted towards performance and if second-language learning is to be a goal of the curriculum. Regardless of Putnam's "ease of learning" claim, 600 hours of instruction suggests (one assumes) concentrated and regular exposure to a language. Chomsky may approve of such a programme as a satisfactory, if artificial, method for fostering the acquisition of a second language, since inherent in such a concentrated and continuous programme inevitably would be at the least an incidental exposure to the language's deep structure (unless, of course, 600 hours of rote learning or 600 hours of programmed learning was the direct method of instruction used, in which case it is possible that the student would not progress beyond surface structures).

2.2 AMERICAN POWER AND THE NEW MANDARINS (1969) Pelican

2.2.1 to 2.2.3.

(a) "The war has revealed a younger intelligentsia, trained up in the pragmatic dispensation, immensely ready for the executive ordering of events, pitifully unprepared for the intellectual interpretation or the idealistic focusing of ends They are a wholly new force in American life, the product of the swing in the colleges from a training that emphasized classical studies to one that emphasized political and economic values. Practically all this element, one would say, is lined up in service of the war technique The formulation of values and ideals, the production of articulate and suggestive thinking, had not, in their education, kept pace, to any extent whatever, with their technical aptitude...."

(b) Chapter "Introduction" page 9.

(c) This necessarily long extract is an abbreviation, in turn, of an abbreviated quotation made by Chomsky from Randolph Bourne's "Twilight of Idols." Bourne discusses the pragmatic liberalism which affected Americans as they entered The First World War in 1917, and its affects on national values and personal world views. Bourne suggests an apparent, positive correlation between the cold pragmatism of the education received by the contemporary generation and their readiness for the arrival of the war, even inferring that the 1917 generation of young men and their education were in some way catalysts for the war. This is grist for Chomsky's mill, especially because Bourne, in a later extract, mentions the "malcontents" who were combatting the insensitive pragmatists. Chomsky uses Bourne's precedent as a model for the then current American pragmatism expressed towards the war in Vietnam and as a justification for contemporary "malcontents" to take up the fight through the anti-war protest movement. (For a discussion on Chomsky's various uses of the term *pragmatism* see below at page 129).

(d) The selection of this compelling passage by Chomsky, as almost a preface for his book, is very significant and very revealing of his attitudes on education. It can be concluded that, like Bourne, Chomsky laments the one dimensional, pragmatic education current at the time

of writing in America. He, like Bourne, is concerned that the pendulum has swung in educational curriculum design too far away from the literary, romantic and classical expressions of culture towards the scientific, technical and immediate, and that this regenerated imbalance has affected not just depth of training in articulate and suggestive thinking, but also the capacity of individuals so educated to make value assessments or act with moral autonomy. Clearly Chomsky sees education over a period as a powerful force for shaping and changing community attitudes and values, for militating for or against economic and political policies by raising evaluative consciousness and that sane and humane ordering of a society in its internal and external dealings can be fostered by balancing the literary and the scientific in education.

2.2.6

(a) With "the surrender of independence, the neglect of teaching, and the distortion of scholarship" the university "is not only failing to meet its responsibilities to its students; it is betraying a public trust."

- (b) Chapter "Objectivity and Liberal Scholarship" pages 23-24.
- (c) Chomsky is developing a theme which warns against threats to the scholarly integrity of the intellectual community, threats growing from a systematic debasement of intelligence and a yoking of university resources to the Vietnam war-machine. He quotes here, with interpolations, sections of a speech by Senator Fulbright entitled "The War and Its Effects", and cites the situation and motives behind this betrayal by Academia as : access to money and influence; mono-ideology; the obsession with problematical trivia characteristic of professionals; and the drive of behavioural scientists towards experimenting on anything and everything, regardless of results in human terms.
- (d) This is a reversion to the theme mentioned in 2.2.1 d. which reveals Chomsky's attitude towards the social value and change agency of education. Clearly by selecting these particular snippets from Fulbright's speech he is expressing his strong commitment to notions of academic freedom and his belief that a university in particular has a profound responsibility for the moral conscience of a society. That neglect of teaching should concern him suggests that he sees a university's teaching role as important as well as its research role.

(a) He therefore calls on the academic community ... to supply ... the teachers, to enable us to conduct such a "resourceful diplomacy" more effectively.

(b) Chapter "Objectivity and Liberal Scholarship" page 52.

(c) Chomsky quotes a prominent member of the pro-war lobby, William Henderson, who advocates a "manipulative diplomacy" in Vietnam which will deflect developments into channels "compatible with the long range interests of the United States" without moral doubts or delay. He argues that Academia should provide the resources and the propagandists.

(d) This suggestion of Henderson's is the antithesis of Chomsky's views inferred in 2.2.6 d above. Chomsky clearly regards this proposed use of educational resources in direct, unquestioning support of government policy, as misuse and morally inappropriate.

2.2.9.

(a) "According to the theory of Mr. Marx, the people not only must not destroy (the state) but must strengthen it and place it at the complete disposal of their benefactors, guardians and teachers - the leaders of the Communist party ..."

(b) Chapter "Objectivity and Liberal Scholarship" page 62.

(c) Chomsky quotes the anarchist critique of Marxism propounded by Bakunin. His reference to "teachers" here is synonymous with "political mentors" rather than educationists. He warns against the creation of an intellectual elite that aspires to a dominant role in society.

(d) Although he is not concerning himself with education as an institution in this reference, Chomsky implies in the general discussion surrounding this Bakunin quote that academic intellectuals should see themselves as having a subversive role in regard to any ideological intellectual elitism whose disguised goal may be self-interest.

2.2.10.

(a) I am not suggesting that the anarchist revolution in Spain - with its background of more

than thirty years of education and struggle -
is being relived in Asia ...

- (b) Chapter "Objectivity and Liberal Scholarship" page 114 N.56.
- (c) This footnote sketches some cultural and historical factors identified by Chomsky in east and south-east Asian revolutionary governments, finding certain features akin to the Spanish example in the 1930's. He concludes that prejudiced intellectuals have overlooked the voluntary spontaneity apparent in popular mass movements.
- (d) By including "education" in this context Chomsky demonstrates his view that some form of systematic education, over a period of time, can produce a new political consciousness leading to social and political change. It neatly illustrates the point (made in 2.2.1 d. above) that education has a change agency role.

2.2.14 and 2.2.15.

(a) They assert that our "commitment" to Vietnam has always been to one element of Vietnamese society, "the urban-educated group"
The "tragedy unfolding in Vietnam"
is that we were unable to realize this commitment, to construct a stable government that would represent the interests of the Vietnamese, as these interests are interpreted by "the urban-educated group".

- (b) Chapter "The Logic of Withdrawal" pages 201-202.
- (c) The disenchantment of leaders from the International Voluntary Services, in their attempts to bring sustenance to Vietnamese villagers, is explained here. The American military intervention for the has been counter-productive since it has alienated the majority of Vietnamese by representing only the interests of an urban-educated elite. Chomsky goes on to question the implicit assumption of the IVS leaders that the United States ever had a right to restructure and organize South Vietnamese society.
- (d) By using "urban-educated" as a mild pejorative here, at least in the Vietnamese setting, Chomsky reveals his strong anti-elitist attitude towards education. He plainly holds that the more prestigious forms of education usually available to city folk should not allow urban dwellers a disproportionate say in shaping the policies and aspirations of a society.

(a) as American technology is running amuck in South-east Asia, a discussion of American schools can hardly avoid noting the fact that these schools are the first training ground for the troops that will enforce the muted, unending terror of the *status quo* in the coming years of a projected American century;

(b) Chapter "Some Thoughts on Intellectuals and the Schools" page 246.

(c) The text of this chapter was delivered by Chomsky as a symposium paper at Harvard College. He prepares to discuss the schools, but cannot separate them, in his discussion, from the symbolic shadow cast across them by the recently instituted bombing of population centres in North Vietnam (1966). The schools create the mentality which allows the world to be regarded as an American preserve by Americans themselves. He moves on by pointing out that it is the intellectuals, usually within the schools, who will largely provide the philosophy which will rationalise atrocities of this type and who will vilify those who oppose such actions. By his use of the generic and indefinite "the schools" Chomsky refers to education in its general institutional sense.

(d) Chomsky clearly believes that contemporary American schools promote conservatism, promote an ideological consensus and provide the United States with a consistent, non-rational nationalism adequate to maintain policies at home and supply manpower to enforce policies overseas. Again the educational reality is far removed from Chomsky's ideal, suggested above in 2.2.1 d.

2.2.21.

(a) It is at least possible that to a young mind, still uncontaminated by cant and sophistry, such a study can teach a revealing lesson.....

(b) Chapter "Some Thoughts On Intellectuals and the Schools" page 252.

(c) The objective study of "national scandals of the past" is recommended by Chomsky as one way through which the schools can promote an objective public consideration of contemporary policies. He cites a study of the Philippines as an example, where he claims the living standards of three quarters of the population have not improved since the Spanish were thrown out and the Americans took over. He recommends this type of study as a guide to colonial policy, which the student could reapply to other cases

in the hope that he would see things from the point of view of the oppressed.

- (d) This is a serious and deliberate attempt by Chomsky to contribute methodology and subject matter to the curriculum of the social sciences. He aims to increase moral and political awareness through this technique (see again 2.2.1 d.)

2.2.22.

(a) This situation again carries a lesson for the schools, one to which teachers in particular should be quite sensitive, bombarded as they have been in recent years by authoritative conclusions about what has been "demonstrated" with regard to human learning, language and so on. The social and behavioural sciences should be seriously studied not only for their intrinsic interest, but so that the student can be made quite aware of exactly how little they have to say about the problems of man and society that really matter.

- (b) Chapter "Some Thoughts On Intellectuals and the Schools" page 253.

- (c) The "situation" referred to here is the prevalent trend, which Chomsky has identified, for the social and behavioural sciences to back up government policies, even in the face of opposing, independent, intellectual opinion. The length of the extract is justified by its pithiness, in that no periphrastic summary could adequately replace it. Chomsky goes on to recommend that the physical sciences need to be studied alongside the social and behavioural, since the former lend a necessary brake to the wilder tenets and zealotry of the latter.

- (d) This extract is pregnant with insight into Chomsky's attitudes to central educational issues, especially again his attitude towards the curriculum content and curriculum methodology which, one assumes, he believes has produced his "New Mandarins" - the elite of liberal experts who profess to analyse problems in a scientific, value-free language and who rebut any human reaction to the Vietnam war, no matter how rational, as sentimentality. He seems to use the term *science* here in a narrow sense. He refers to "scientific" practice and research which fosters a technology of control and manipulation, and which itself deals only with variables which can be easily manipulated while ignoring less discernible variables which are perhaps more important.

He identifies a recent trend in educational research to reach "firm" conclusions in matters such as learning theory and language, yet the abstractions and the important and complex issues are often excluded as non-measurable, therefore non-scientific, therefore irrelevant (refer especially to 2.1.14 above where he rejects Putnam's criticism on the grounds of its over simplification). Chomsky is fearful of the influence such "value-free" findings will have on teachers and, of course, on students. Will they passively accept the authority of the social and behavioural sciences, because their findings can be computer programmed, while other, overlooked but important, variables, such as the categories in which war-protests are formulated (shame, indignation, honesty), cannot be programmed and measured? Chomsky is concerned that another, educated generation will rise up, shaped by the tendencies and "scientific" tough-mindedness of the present, but even more out of touch with real human problems.

2.2.23.

(a) It was moving to see that defenceless young people who had a great deal to lose were willing to be jailed for what they believed - young instructors from state universities, college kids who have a very bright future if they are willing to toe the line

(b) Chapter "On Resistance" page 297.

(c) After arguing overwhelmingly that resistance to the war should remain non-violent, Chomsky mentions recent demonstrations (October 1967) indicating his relief and reassurance that they were supported by people of influence and great respectability. This bolstered the resolve of the young and vulnerable who need this type of support, in his view.

(d) Clearly Chomsky applauds the attitude that education, especially tertiary education, should provide the practical support for demonstration against the War, with numerical support coming from students and young faculty members and inspirational leadership from established academics and celebrities. The strong implication here is that Chomsky approves of tertiary education providing the visible non-violent support for any justifiable cause which

questions and combats insensitivity to human needs (see the "malcontents" in 2.2.1 c above).

2.2.24.

(a) As the coffins come home and the taxes go up many people ...will become increasingly concerned to try to think for themselves. The reasons for their change are unfortunate; the opportunities for educational activity are nevertheless very good.

(b) Chapter "On Resistance" page 298.

(c) The question of popularising the anti-war lobby's point of view is under discussion. Chomsky indicates that a climate of receptivity is developing in which previously neutral or antagonistic sectors of the population can be swayed by "educational", patient explanation.

(d) This reference does not relate to education as defined, although it does point up Chomsky's awareness, as a teacher, of the need to choose one's moment well for introducing new subject matter.

2.2.25.

(a) Many avenues of political education, on and off the campus, have been explored in the past two years.

(b) Chapter "On Resistance" page 300.

(c) Chomsky discusses the comparative ease and safety for protestors in a democratic society. (see 2.2.24 above)

2.2.26.

(a) Senator McCarthy's candidacy might be important as an educational effort if McCarthy were to raise serious issues ... but as yet he has not done so.

(b), Chapter "Supplement to 'On Resistance'" page 310.

(c) The impending Presidential Election (November 1968), as an opportunity for meaningful action at the political level on the issue of the Vietnam War, is under discussion. Chomsky laments the likelihood that electors will not be offered policies on this issue which will offer a real choice.

(d) Again this is a reference not relevant to education as defined. However the point needs to be strongly brought home that Chomsky does not view education in a narrow, institutional sense. Quite clearly he sees politicians, other public figures and the mass media as educational agencies, not simply as information processors, disseminators and policy planners.

2.3 RELEVANT PUBLISHED PAPERS (1968-1969)

2.3.1 and 2.3.2.

(a) But it is important to find a way, in teaching even more than in research, to place the work that is feasible and productive at a certain moment against the background of the general concerns that make some questions, but not others worth pursuing I am putting this too abstractly, but I think the point is clear, and I think that it indicates a defect of much of university education.

(b) "Philosophers and Public Philosophy" Ethics 79, 1 page 7.

(c) In this article Chomsky urges philosophers to help restore integrity to intellectual life in America and revitalise cultural values. He is concerned to reverse the growing trend towards the development of a technology of control and manipulation in and by the social and behavioural sciences. In particular he advises university philosophers to form a vanguard in combatting this trend by urging the critical study and analysis of the trend itself, against the background of the cultural and ethical damage the trend is promoting. This task he describes as more important than other tasks on the horizon, even though these too are serious and demand attention. He recommends that priority be given to research and teaching in this area of analysis because it is socio/behavioural training which serves as the basis for creating the ideology of the "new mandarins" (see 2.2.1 d and 2.2.22 d above; this paper antedates slightly publication of 2.2)

(d) Social relevance must always be an important factor in deciding directions for tertiary teaching or research, according to Chomsky. A maintenance of perspective in designing tertiary syllabi is needed and this perspective should be critically examined by those undertaking the teaching and by the students themselves. Priorities ought to be ranked in tertiary teaching according to general social goals. Graduate students, as a continuing part of the teaching/learning process, should be encouraged to defend the significance of the field of work in which they are engaged and face the

challenge of a point of view and a critique that does not automatically accept the premises and limitations of scope that are to be found in any discipline. University philosophers are well equipped for this function and are encouraged to practise it, in particular with students in the social and behavioural sciences.

2.3.3

(a) I think that the applications of behavioural science in education or therapy, to mention just two examples are as much in need of critical analysis as the applications to counterinsurgency.

(b) see 2.3.1 b above.

(c) Chomsky gives examples of areas for analysis by philosophers (see 2.3.1 d) taken from spheres of influence of the social and behavioural sciences. He warns that his concern is not simply for their influence on political affairs (foreign policy and manipulative diplomacy in particular). Education and therapy also require urgent attention.

(d) refer to comments at 2.1.3 d, 2.2.22 d.

PART THREE

"AT WAR " TO "PROBLEMS "

3.1, AT WAR WITH ASIA (1970) Fontana

3.1.4. to 3.1.11

(a) The Laotian educational system presents a similar picture...The American aid programme has helped, but it too tends to perpetuate the distorted pattern of education for the élite. Funds for secondary education are about the same as the funds for primary education: "The school is still training a minority of the youth, particularly at secondary levels, to take their place in administration.... And the concept of responsibility to the nation is still not being taught forcefully anywhere in Laotian society." A sensible Education Reform Act of 1962 remains largely a paper programme. Fred Branfman concludes that "the school system is training a class of consumers, not producers of wealth", a Western - oriented élite that might, at best, administer Laotian society in the interest of the domestic élite and its American backers.

(b) Chapter "Laos" pages 148-149.

(c) In March 1970 Chomsky visits Indochina, with special plans for a trip to North Vietnam at the invitation of the North Vietnamese. He spends some time in Laos on the way and describes, in this Chapter, the depressed conditions in the country, concentrating in these extracts on the educational system. He makes direct quotations from Fred Branfman's "Education in Laos Today", a speech given in 1968, and these lend support to his impressions of miseducation and maladministration.

(d) Because of Chomsky's objectivity here and his use of a recognised authority, little of his true attitudes to education are patently revealed. However he indirectly acknowledges, by the mere inclusion of this detailed information, his firm attitudes towards certain facets of education especially in developing countries, while attitudes similar to those expressed in 2.2.14 d are revealed as well. He concentrates

also on secondary education deficits, since presumably it is here where powers of critical analysis in a population can be better fostered, rather than through primary education alone. Yet in secondary education in Laos only future bureaucrats are trained, a service class inculcated with a consumer-based value system. Again there is indirect mention of the national consciousness-raising function of education (see 2.2.1 d), a curriculum direction not being forcefully pursued in Laos. Chomsky clearly sees a primary purpose of education in developing countries as the raising of the critical faculties of the population to an awareness of economic exploitation and cultural oppression by foreign nations and indigenous *élites*.

3.1.14.

(a) "Direct orders are not enough; people must be 'taught' until they genuinely believe in what they are doing"

(b), Chapter "Laos" page 171.

(c) "Taught" here refers to "political indoctrination" by methods of persuasion and guilt, questioning and discussion. A specialist on the Pathet Lao in the American Embassy in Vientiane gives his impressions.

(d) See 3.1.66 d and 3.1.68 d below.

3.1.15 and 3.1.16.

(a) Pathet Lao measures ... to support teachers and medical personnel educational reforms, including primary schooling in virtually all villages and the introduction of textbooks which "emphasize hygiene and better agricultural practices, as well as self-denial, communal endeavor and solidarity against U.S. imperialism"; adult literacy programmes

(b) Chapter "Laos" page 172.

(c) Further comments (see 3.1.14c above) produce a list of Pathet Lao directed reforms, especially in education.

(d) The Pathet Lao are supplying many of the educational necessities Chomsky has noticed are absent from the official government education system. The most effective education comes from those who live and work with the people, supplying other basic services at the same time, because the aims then are immediate and local, not remote and foreign.

3.1.17

(a) the "determined effort to raise the level of social consciousness and to instill ambition in the people"; educational programmes; and "the most drastic changes", the stress on "the need for equality of opportunity and close co-operation among all ethnic groups".

(b) Chapter "Laos" page 173.

(c) An extensive study by the RAND Corporation reveals some surprisingly favourable comment on Pathet Lao methods. Chomsky demonstrates that communist practices seem to live up to their principles.

(d) The development of racial and ethnic harmony, self-esteem and initiative, and social awareness, are all seen as almost integral factors in grass-roots educational programmes.

3.1.18. to 3.1.21.

(a) "by on-the-job training"they ...have trained native Lao
The information on North Vietnamese training is of some interest"a class were taught auto mechanics, weapons repair.....

(b) Chapter "Laos" page 174.

(c) Direct North Vietnamese assistance to the Pathet Lao is described with direct quotes supplied from Langer and Zasloff's RAND Corporation document *Revolution in Laos: The North Vietnamese and the Pathet Lao*, in which Pathet Lao defectors are quoted.

(d) These references relate to specific job or military training. The work of the hand must be coupled with the work of the mind.

3.1.22.

(a) One agreed that the Pathet Lao educational reforms were particularly good, but said that the Royal Lao Government was now imitating these programmes, specifically the adult literacy programme. I tried to check this information with reportersresponses ranged between scepticism- and ridicule ...I met noone outside the Embassy who believed the RLG was capable of implementing such a programme.

(b) Chapter "Laos" page 175.

- (c) Chomsky hears approving comments from an Embassy official on communist educational practices. The gullibility (?) of the official is revealed in relation to government initiatives in education.
- (d) See comments at 3.1.15 d. The corollary is that remote, elitist governments, submissive to foreign powers, cannot or will not provide the education which Chomsky infers is necessary.

3.1.23 - 3.1.59.

(a) "They would teach them not to steal"
This informant had never been to school and was quite pleased with the Pathet Lao education reforms. He said that the teachers were taken to Phonesavan to be taught and then returned to the village

He was not sure what the Pathet Lao taught the teachers, but when they returned they taught only in Lao, no longer in French. Everyone was taught to read, the women in particular " ... Before the teacher didn't work as much. Now he worked much more. The teacher wasn't happy because he was working all the time"

We interviewed two of the village teachers. They said that when the Pathet Lao came in 1964... they took the teachers to Phonesavan for ten days.. They instructed them in teaching methods, and told them they must teach in Lao, not French They also gave them political education. "They taught us that under the French a French style education was taughtbut now they taught us thatwe have a liberated style of education and education would teach people to love their countryEducation was now for everyone ... In the old days education was mainly in the towns and cities.... the Pathet Lao trained many teachers and many more people were educated ..."

Language teaching and mathematics were made more difficult than before ... The teacher was required to conduct an adult literacy programme on Saturday and Sunday ... Villagers ... became literacy instructors Before, there had been just mechanical teaching of reading, with no content ...

The intention was to extend education to grades 5 to 7

"They taught us mainly agriculture ..."

The Pathet Lao took 15 per cent of everything above subsistence. This was for the soldiers, teachers and medical personnel whom they trained and returned to the village ...this informant was rather sceptical about the medical training.

- (b) Chapter "Laos" pages 188-190.
- (c) Chomsky spends several days visiting a refugee camp near Vientiane, filled with Laotian peasants driven from the countryside by American bombing. Several witnesses report on their attitudes to the Pathet Lao, and at length on communist educational reforms. There is considerable corroboration.
- (d) Through this very full, detailed and internally corroborated passage in his text, Chomsky reveals much about what he values in education. Equality of educational opportunity, without discrimination on any ground, is a most desirable priority. Education in the vernacular, and focussed on the local culture, is essential if it is to have a liberated and liberating style. Standards and levels of excellence in functional subjects must be raised. Adult literacy programmes must complement the work in the schools for children, and these must be open to all who need them. Textbooks must focus on issues relevant to the students' lifestyles to hold their interest and motivate them. Rote practices in reading teaching are to be discouraged. Education and politics are inseparable. Education, itself, is a political act.

3.1.60 to 3.1.62.

- (a) American officials are also impressed with the Pathet Lao educational programme, and ...they may be attempting to imitate it. A RAND study reports that "1967 constituted something of a landmark in Lao education: an American-financed secondary school got underway in Vientianefor the first timemost of the instruction will be offered in the Lao language ..."

(b) Chapter "Laos" page 190.

(c) Chomsky describes American attempts to rival the Pathet Lao in the quality of educational provision offered in Laos. The study referred to is Paul F. Langen's *Laos: Search for Peace in the Midst of War*.

(d) See 3.1.22 d above.

3.1.64

(a) The lesson was lively. Children tried to work out proofs of theorems as the teacher sketched their proposals on the blackboard. The level was remarkable.

(b) Chapter "North Vietnam" page 213.

(c) Now in North Vietnam, Chomsky visits various community institutions. He is impressed with the quality of elementary education in Thanh Hoa Province, the existence of universal adult literacy, the provision to all children of ten grades of schooling and the number of students going on to university each year.

(d) The contrast with the Laotian government's education system, discussed at 3.1.4 to 3.1.11, is marked and perhaps intentional. Both countries are devastated by war, yet educational provisions

are vastly different in quality. This imbalance verifies the inference made at 3.1.22 d as a legitimate interpretation of Chomsky's attitude.

3.1.65.

(a) With remarkably high standards of education and health ...there seems every possibility that these goals can be realized....

(b) Chapter "North Vietnam" page 215.

(c) Once the bombing stops, Chomsky is optimistic that economic development in North Vietnam will be rapid because educational and health-care facilities are widespread and very effective. In his view North Vietnam will avoid an artificial consumer culture for an urban minority of privileged people, such as those in existence in Saigon, Bangkok and Manila.

(d) See 2.2.14. and 3.1.4.

3.1.66 and 3.1.67.

(a) "...it must promote both the material interest and the political and ideological education, the socialist education, of the great masses"

(b) Chapter "North Vietnam" page 217.

(c) Le Duan, a North Vietnamese Minister, is quoted here stressing the direction economic management should follow. It must promote the government's philosophy.

(d) These citations refer to indoctrination processes propagating the ideology of the government of North Vietnam. Chomsky raises no objection to Le Duan's use of the term "education" in this context. Presumably he approves of this type of "education" as necessary in the North Vietnamese milieu at the time of his visit although there is tacit disquiet expressed in his reference to these tasks not being compatible(see 3.1.68. below)

3.1.68

(a)a highly egalitarian society with excellent conditions of welfare and technical education, but with a degree of centralization of control which, in the long run, will pose serious problems that can be overcome only by eliminating party direction in favour of direct popular control at all levels.

(b) Chapter "North Vietnam" page 218

(c) Chomsky discusses the prospects for the development of a direct democracy and modern industrialisation in North Vietnam.

(d) Although the citation itself is relatively incidental, its context does give a partial answer to the question implied in 3.1.66 d above. Chomsky is troubled by the communist party's tight governmental rein in North Vietnam. He sees this centralization of control diminishing, and with it, presumably, will arise greater ideological diversity, more democratic participation in decision making and the disappearance of ideological indoctrination which poses as education.

3.1.69 and 3.1.70.

(a) "... peasants have a very conservative attitude and are very mean. They have to be educated..."
".....the villagers gradually, through their own efforts ...and the education (both formal and informal) growing out of these activities mutually enrich each other."

(b) Chapter "North Vietnam" page 219.

(c) These two separate citations complement one another. The first quotes an old Vietnamese man who explains the traditionalism of Vietnamese peasants and ascribes it to lack of education. The second quotes the British China scholar, Jack Gray, who gives a precis of Mao tse tung's socioeconomic theory of development. Chomsky confirms that North Vietnam is taking note of these requirements in its

planning for development.

- (d) Chomsky leaves no doubt through his favourable comments on North Vietnamese education in general, both here and elsewhere, that in his opinion living standards and general economic development is enhanced by educational approaches in developing countries similar to those used by the Hanoi government.

3.1.71

(a) Other scientists and intellectuals too were extremely eager to discuss current work and educational curricula....

- (b) Chapter "North Vietnam" page 221.
- (c) In discussing the quality of higher education and research in North Vietnam, Chomsky is favourably impressed, in spite of the meagre resources available.
- (d) See 3.1.69 d above.

3.1.72 to 3.1.74.

(a) He was the Minister of Higher Education of North Vietnam....there are few countries where the Minister of Higher Education could have taken over the task of translating an advanced technical lecture
In fact, at the Polytechnic University the Vietnamese are training scientists of whom any society could be proud.

- (b) Chapter "North Vietnam" page 222.
- (c) Chomsky lectures at the Polytechnic University. He is surprised when a Minister in the government, who is also a mathematician of note, relieves the official translator. Scientific training is also producing positive results in spite of wartime conditions (or perhaps because of them?)
- (d) See 3.1.69 d above.

- 3.2 PROBLEMS OF KNOWLEDGE AND FREEDOM (1971) - first published by Pantheon
- this edition Fontana (1972)

3.2.1.

(a) The task of a liberal education, Bertrand Russell once wrote, is "to give a sense of the value of things other than domination, to help to create wise citizens of a free community, and through the combination of citizenship with liberty in individual creativeness to enable men to give to human life that splendour which some few have shown that it can achieve"

(b) "Introduction" page 9.

(c) This is Chomsky's opening sentence in his introduction to the Bertrand Russell Memorial Lectures, delivered at Trinity College Cambridge in 1971. He quotes from Russell's *Power: A New Social Analysis* using Russell's own words to characterise the man himself as one whose life has manifested "that splendour" in his efforts to interpret and change the world.

(d) As well as revealing much about Russell's attitudes to education, there is nothing here with which Chomsky would disagree (see 2.1.1. d, 2.2.1. d, 2.2.22. d and 3.1.23. d above). A "liberal education", as well as being multifaceted, must also be liberating for the physical man, for his intellect and for those things which he touches upon.

3.2.2.

(a) Alternatives are conceivable. For example one might argue that children are specifically trained to follow the principles in question, or, more plausibly, that these principles are special cases of more general principles of mind.

(b) Chapter "On Interpreting the World" page 41.

(c) In this, the first lecture, Chomsky is answering Russell's question: "How comes it that human beings, whose contacts with the world are brief and personal and limited, are nevertheless able to know as

much as they do know?" He demonstrates that there seem to be universal invariant principles that determine the form and interpretation of sentences and that these are innate. He allows here a contradictory view but relegates it until it can be reasonably formulated (see 2.1.3 c above)

- (d) Chomsky allows little plausibility to the view that children are trained to identify and employ the basic principles of linguistic competence. As with foreign language learning (see 2.1.7 d above) there is little that can be directly taught to facilitate the learning of a native tongue. He does allow a possible, alternative proposal - that special cases of the principles may exist - however he makes no allowance for the possibility that special cases are taught either. In fact these special cases seem to be nothing more than the idiosyncratic elements referred to in his earlier work (see 2.1.3 above).

3.2.3 and 3.2.4.

(a) ... Russell inclined towards libertarian concepts of education and social organization. Education, he urged "should not aim at a passive awareness of dead facts, but at an activity directed towards the world that our efforts are to create."

- (b) Chapter "On Changing the World" page 47.

- (c) In introducing his second lecture, Chomsky discusses Russell's philosophical programme for world improvement, one based on liberal or libertarian socialism. His view, with particular relevance for advanced industrial societies, sees, in the short term, workers' control of industry, democratic, representative parliaments, restricted forms of state management, guaranteed minimum living standards and a successful form of popular counter-control to balance the powers of governments. Education has a key role here, since clearly Russell's programme depends for realization on the creation in other men of a similar concept of social organization. Chomsky here quotes Russell's *Principles of Social Reconstruction*.

- (d) See 3.2.1. d above.

3.2.5.

(a) "..... Whatever does not spring from a man's free choice, or is only the result of instruction and guidance, does not enter in his very being, but still remains alien to his true nature; he does not perform it with truly human energies, but merely with mechanical exactness".

- (b) Chapter "On Changing the World" page 48.

(c) Russell, according to Chomsky, would have agreed with Wilhelm von Humboldt, whose book *The Limits of State Action* he quotes from here. The viewpoint is expressly libertarian and quite opposed to any concept of philosophical determinism, in keeping with the views of Russell and Chomsky, the latter's evidenced already in his discussion of docile wit (at 2.1.1. d). Social forms must be devised which foster the use of free-will inspired human action. (see 4.1.59 below)

- (d) Direct instruction in any matter, with motivation and "willingness" absent, promotes a non-human mechanicalness which should not be the fruit of true education. Chomsky's message is clear.

3.2.6 - 3.2.8.

(a) Russell's opposition to coercive educational practice was linked to his desire for a radical reconstruction of society ... He retained a fundamental optimism that education could overcome the ignorance that "secures popular support for what is evil "....."the main thing needed to make the world happy is intelligence. And this, after all is an optimistic conclusion, because intelligence is a thing that can be fostered by known methods of education".

- (b) Chapter "On Changing the World" page 49.

(c) Quotations from Russell's Nobel Prize lecture in 1950 *What Desires Are Politically Important?* illustrate Russell's strong

commitment to the notion of social change flowing from liberal, educational practices and his optimism placed in the potential benefits which will accrue from such an education.

- (d) Russell's views again are Chomsky's, as illustrated especially at 2.2.10 d above. The viewpoint may be summarised as : non-coercive education → reduction of ignorance → withdrawal of popular support for evil → enhanced human happiness.

3.2.9.

(a) What Russell held to be necessary is an extensive effort at persuasion and education: "it is in the United States, as the leading capitalist nation, that this reasonable propaganda of socialist opinion is most needed."

- (b) Chapter "On Changing the World" page 50.
- (c) Appropriate propaganda based on reason and presented in the great states, according to Russell, would produce worker control of industry. This control would be neither vested in a privileged few, as under capitalism, nor vested in a state socialist bureaucracy, as under totalitarian communism.
- (d) Education is a political act (see 2.2.26 d and 3.1.23 d) provided any political persuasion formulated through education remains " a reasonable propaganda" and not simple indoctrination. Propaganda in education, by inference, if reasonable is benign (compare with inferences at 3.1.66 d and 3.1.68 d above).

3.2.10

(a) If the ground is prepared by widespread technical and business education, self-government in industry will preserve and extend democracy and avoid a technical breakdown of production.

- (b) Chapter " On Changing the World" page 51.

- (c) The development of worker control in industry is the best avenue towards Russell's ideal form of communism. Here education has the crucial role of developing hope for the future and an inspirational ideal.
- (d) Technical education has a function outside the production of artisans and clerical employees. It must equip its students with the personal resources of character and leadership which will be required when worker control inevitably becomes a reality. The hiatus between traditional managers and worker managers must be immediately filled by specially trained workers if there is to be no chaotic breakdown of production.

3.2.11

- (a) The problem has received lively discussion in connection with the recent revival of interest in workers' control of industry; so it must when we read ...about the importance of "exploring new ways of training and supervising a workforce" ...
- (b) Chapter "On Changing the World" page 63.
- (c) The development of workers' councils in the American milieu holds one important hidden snare, according to Chomsky. There is the risk that they will be "coopted" and used as an instrument to "socialize" and integrate the proletariat into an industrial society basically unchanged. The only book on the subject, Adolf Sturmthal's *Workers' Councils*, makes suggestions which illustrate "the problem" and indeed would point workers' councils in the direction of becoming mere instruments of industry rather than controllers of it. The fear is a real one, namely that workers will be trained into quiescence and their protests dissipated, yet Chomsky urges that informed action must proceed, in spite of this risk, since the alternative is paralysis.

- (d) Training, in this citation, refers to that form of instruction which Chomsky would not characterize as "true education"; training of this type is practised on the docile wit", (see 2.1.1. above). The corollary, for Chomsky, is that a training should be provided for workers which alerts them to the risks of manipulative processes inherent in their training. (see 3.2.10 d above)

3.2.12.

(a) "The war, in the massive, lethal dimension it acquired after 1964 was the work of highly educated academics and administrators It was the Rusks, McNamaras, Bundys, and Rostows who must bear major responsibility for the war and the course it took"

- (b) Chapter "On Changing the World" page 68.

- (c) The poor record of America's intellectual community in opposing the Vietnam War is under discussion. Chomsky quotes Telford Taylor, a Professor of Law at Colombia University and formerly a Nuremberg Trials chief U.S. counsel, who lays the blame for escalation in the war and the ruin brought to Indo-China with the highly trained shapers of American policies at home and abroad. These men should be judged by the principles established at Nuremberg if justice is to be applied evenly.

- (d) The form of education, which made these leaders "highly educated", is called into question here (see 2.2.1) As well, presumably, Chomsky bemoans the tendency of academics to overlook their implied responsibility for the moral conscience of a society (see 2.2.6 d, 2.2.19 c, 2.2.19 d and 2.2.22 d).

3.3' RELEVANT PUBLISHED PAPERS (1970-1972)

3.3.1 to 3.3.3.

(a) I am not convinced that he would at once apply for a job as a garbage collector if this were to pay more than his present position as a teacher and research psychologist.... The statistical evidence, he points out, suggests that "if *very* high income is your goal, and you have a high I.Q., do not waste your time with formal education beyond high school." Thus, if you are an economic maximizer with a high I.Q. don't bother with a college education.

(b) "I.Q. Tests: Building Blocks for the New Class System"

Ramparts 11 : July 1972 page 27

(c) In this article Chomsky discusses Harvard psychologist Richard Herrnstein's controversial views on the social importance of I.Q. These were first presented under the laconic title "I.Q" in a 1971 edition of *Atlantic*. In short Herrnstein's argument purports to show that American society is drifting inexorably towards a stable, hereditary meritocracy, towards a social stratification determined by inborn differences and a corresponding distribution of rewards. Chomsky breaks Herrnstein's argument into two component hypotheses and then proceeds to rebut both. In this extract Chomsky deals with a fundamental component of Herrnstein's case; the assumption that people will work only for gain in wealth and power rather than for the intrinsic reward inherent in the work itself. The psychologist claims that if this were true highly intelligent people would bypass formal education and move directly into salaried positions. This is patently false. Herrnstein's assumption about work motivation, according to Chomsky, is common to capitalist ideology and the behaviourist view of human beings.

(d) One purpose of post-secondary and higher education, for Chomsky, is to enable the educand to secure for himself a relatively interesting work situation. This purpose would outweigh, in the minds of most people, the goal of achieving mere material reward

through advanced, educational qualifications.

3.3.4.

(a) Teachers in ghetto schools commonly observe that students who are self-reliant, imaginative, energetic and unwilling to submit to authority are often regarded as troublemakers and punished, on occasion even driven out of the school system.

(b) See 3.3.1. b above; page 28.

(c) See 3.3.1. c above. Herrnstein also argues subjectively that other positive characteristics in a "meritocracy", as well as I.Q., may be inheritable and lead to social success. Chomsky refutes this by suggesting that negative characteristics such as cunning, avarice, subservience and ruthlessness may be of more value for promoting social achievement in Herrnstein's terms. He demonstrates here, using a list of positive qualities, that social rewards for individuals, in certain discriminatory settings, may be available in inverse proportion to the "meritorious" characteristics possessed.

(d) Chomsky is convinced that, in a society where there is great inequality in wealth and power, schools in ghetto areas often discourage positive qualities in children and develop implicitly, in lieu of such qualities, beliefs and dispositions that are highly miseducative.

3.3.5.

(a) In a decent society ...there should be no shortage of scientists, engineers, surgeons, artists, craftsmen, teachers, and so on, simply because such work is intrinsically rewarding.

(b) See 3.3.1. b above; page 29.

(c) Chomsky makes the point that in a decent society people would have, as an inalienable right, the widest possible opportunity to

do work that interests them. In such a society people would pursue interesting occupations without the motivation of the extrinsic reward that Herrnstein's argument implies.

- (d) Teaching is a desirable occupation for its own sake.

3.3.6.

- (a) We do not insist on assigning each adult to the category "below six feet in height" or "above six feet in height" when we ask what sort of education he should receive or where he should live or what work he should do.

- (b) See 3.3.1 b above; page 30.

- (c) Chomsky shows that only a racist society would accept social discriminatory consequences as a result of a correlation being found between race and mean I.Q. He claims that our concern is with individuals, not categories based on arbitrary correlations such as skin colour with I.Q., or height with I.Q. In the latter case there may well exist a positive or negative correlation, but there would be no social implications for tall or short people, as a group, as a consequence of it.

- (d) This section reveals, once again, Chomsky's strong commitment to equality of opportunity in educational provisions. Implied here is his view that I.Q. has only value at the individual level, perhaps for comparing a student's individual achievement with a rough measure of potential.

3.3.7.

- (a) The question of heritability of I.Q. might conceivably have some social importance, say, with regard to educational practice. However, even this seems dubious, and one would like to see an argument.

- (b) See 3.3.1. b above; page 30.

- (c) The article is concluded by a virtual dismissal of the social importance of the question raised by Herrnstein, even for education.
- (d) This reinforces the implication, made in 3.3.6 d above, that I.Q. has only relevance in relation to individuals for Chomsky. The I.Q. of any student's parents or ancestors should not affect educational practice relevant to that student.

P A R T F O U R

"FOR REASONS OF STATE" to "REFLECTIONS"

4.1 FOR REASONS OF STATE (1973) Pantheon

4.1.23

(a) Taylor observes, correctly and appropriately, that "the war in the massive, lethal dimensions it acquired after 1964, was the work of highly educated academics and administrators"....

(b) Chapter "The Rule of Force in International Affairs" page 230

(c) See 3.2.12c above

(d) See 3.2.12d above

4.1.25

(a) "Sound domestic policies" are those that integrate South Vietnam into the free world economy, resisting "economic parochialism" and state interference (apart from fiscal policy, urban reconditioning, construction of large infrastructure projects, public health and education, including "conversion of skills acquired in the army to economic purposes").

(b) Chapter "Indochina: The Next Phase" page 264

(c) Chomsky quotes, and at times paraphrases, sections from a number of papers written in 1971 by Harvard economist Arthur Smithies, who analyses South Vietnam's prospects for development after the war has "withered away" and foreign investment returns. Smithies sees South Vietnam following the model of Taiwan and Korea, with even education subordinated to the needs of capitalist economic development. Chomsky comments that the only form of liberation contemplated by Smithies is the liberation of foreign investment "from the uncertainties and obstacles that beset it."

(d) Chomsky has little respect for educational policies and objectives which merely serve economic aims, especially the economic aims of foreign capital, at least in the South Vietnamese setting, and by implication in any country subject to economic exploitation by foreign interests.

4.1.26

(a) ".... the Japanese parent also announced its ultimate intention to use the Saigon venture as an export processing plant," using workers trained in various skills in connection with United States military activities.

(b) Chapter "Indochina: The Next Phase" page 274

(c) Japanese economic aid to the South Vietnamese is not characterised as "an exercise in altruism and humanitarian concern." Chomsky to prove this point, quotes here a 1972 article from *Business Asia*.

(d) See 4.1.25d above.

4.1.29

(a) Formal changes in university structure will have little effect on what a student does with his life, or on the relation of the university to society. To the extent that reform does not reach the heart of the university - the content of the curriculum, the interaction between student and teacher, the nature of research, and in some fields, the practice that relates to theory - it will remain superficial.

(b) Chapter "The Function of the University in a Time of Crisis" page 299

- (c) An apparent, renewed concern with university reform is under discussion. Chomsky sees this growing from the complacency - shattering actions of the student movement of the 1960's. University reform is an insignificant matter except insofar as it contributes to social change.
- (d) Changing the structures in university education is pointless if the processes and attitudes of those within the structures remain unchanged. It would be a fair inference to generalise this view of Chomsky's to education at every level. He identifies in this extract very clearly those things in universities which he holds to be important; the content of the curriculum, the interaction between student and teacher, the nature of research, and the practice that relates to theory. If reforms are to be practical they must relate to these areas.

4.1.30 to 4.1.33

(a) Consider, for example, the competitiveness fostered in the university, in fact, in the school system as a whole. It is difficult to convince oneself that this serves an educational purpose....
collective effort with sharing of discovery and mutual assistance is the ideal; if it is not the norm, we rightly interpret this as an inadequacy of those who cannot rise above personal aggrandizement and in this measure are incompetent as scholars, scientists and teachers. Yet even at the most advanced level of graduate education, the student is discouraged ... from working ... individually where his interests lead him; collectively, when he can learn from and aid his fellows What is true even at the most advanced levels of graduate education is far more significant at earlier stages, as many critics have eloquently demonstrated.

- (b) Chapter "The Function of the University in a Time of Crisis" pages 299-300
- (c) In this chapter Chomsky is partly trying to provide answers to the following: to what extent are educational institutions themselves capable for their shortcomings; to what extent do they simply reflect social traits; and to what extent do they promote undesirable social traits and social conduct. He focusses here on what he sees as an over-emphasis on competitiveness in education in general.

- (d) The competition and secretiveness fostered throughout educational systems is miseducative since it patently does not prepare the student for the life of a scholar, a scientist or a teacher for example who must share the benefits of their work. Chomsky believes that education should foster co-operative attitudes rather than competitive ones so that these may be manifested by the students later in life and gradually become commonly accepted social traits. University regulations, course projects and examinations all need to be changed in style to eliminate, as much as possible, emphasis on undesirable competitiveness. Doctoral dissertations should not be constrained too rigidly to individual contributions, to fixed time-spans, to limited goals, and to conventional, unspeculative subjects for investigations. Triviality in research will result from such constraints and, in later life, scholars may devote their careers, as a result, to trivial modifications of work already done. Variety and creativity are stifled. Pursuit of self-interest in the competitive society may be responsible for the general competitiveness in education.

4.1.34 to 4.1.41

(a) Some of the pressures that impoverish the educational experience and distort the natural relation of student and teacher clearly have their origin in demands that are imposed on the school "higher education has been burdened with the task of becoming a gatekeeper - perhaps the only gatekeeper to significant place and privilege in society it means that the educational system is no longer geared to teaching but to judging." The same, incidentally, holds of later life In fact there are programmes for bringing corporate executives or engineers from industry to the university for specialized training or simply for broadening their cultural background, but none, to my knowledge, for shoemakers or industrial workers, who could in principle profit no less from these opportunities. In general, there is little if any educational function to the requirement that the university be concerned with certification as well as with education and research. On the contrary, this requirement interferes with its proper function. It is a demand imposed by a society that ensures, in many ways, the preservation of certain forms of privilege.

(b) Chapter "The Function of a University in a Time of Crisis" page 301

(c) See 4.1.30c above. In part, in these extracts, Chomsky quotes Daniel Bell's 1968 article "The Scholar Cornered" in *American Scholar*.

(d) Higher education is a powerful instrument for perpetuating social privilege. Social pressures demand that universities impose standards based on criteria which are strongly biased against those who lack appropriate character traits and attitudes. These criteria manifest and reinforce the values of the upper-middle class. Youngsters born into lower-strata families possess "the wrong attitudes." The inequity continues into later life, since only those with a university or college background may enter mature age courses for updating skills and for continuing education, while folk from the more humble occupations deserve and may make better use of such opportunities. Demands that higher education should concern itself with certification are educationally dysfunctional and are again socially discriminating.

4.1.42

(a) In an advanced industrial society, the link between the university and external social institutions tends to become more tight and intricate, because of the utility of the "knowledge that is produced" (to use a vulgar idiom) and the training that is provided.

(b) Chapter "The Function of the University in a Time of Crisis" page 303

(c) Chomsky is pursuing a theme repeated from his earlier work (see especially 2.2.1d, 2.2.6c, 2.2.6d and 2.2.7d). He goes on to quote again Randolph Bourne's comment in 1917 (see 2.2.1d above) and compares the situation described by Bourne during World War I, in relation to the independent role of universities, with the contemporary situation. Although he questions some of Bourne's rhetoric, and in consequence some contemporary rhetoric on this theme, he is genuinely concerned that universities have been degraded to the level of private commercial corporations rather than remaining communities of scholarship.

- (d) There are no new insights here. It is not possible to conclude that Chomsky's views in this area have remained unchanged in the period 1968 to 1973 (i.e. from the publication of 2.2 to the publication of 4.1) since this chapter was originally written and published in 1969 in the Encyclopedia Britannica's *The Great Ideas Today*. That he should allow the article to be reprinted without change, however, in 1973, strongly suggests that his attitudes have remained constant.

4.1.43

(a) "Like all my friends at college, I hadn't the slightest interest in the university as an institution: I thought of it, when I thought of it at all, as the inevitable philistine condition of one's being given leisure, a few interesting teachers and a library

- (b) Chapter "The Functions of the University in a Time of Crisis" page 305
- (c) By concluding that American society in general became depoliticized in the 1950's, Chomsky argues that almost by default universities became the centre of intellectual life. He quotes here Lionel Trilling in a 1968 edition of *Partisan Review* whose own earlier university background does not allow him to comprehend the militancy of contemporary students. Chomsky describes the shift in student attitudes towards the university, a shift away from seeing it as merely the focus of sporting and fraternal interests, to a recognition of its role as the headquarters of intellectual and social life. He goes on to speak approvingly of this trend and censures the irrationality of those who oppose it.
- (d) The development of the university as the centre of social, political and intellectual life is a salutary change for Chomsky, especially while American society lacks other realistic, alternative focal points in a largely depoliticized society. On the other hand, for universities to fill this headquarters role, changes of the type described at length elsewhere will have to be forthcoming (see especially 4.1.29d, 4.1.30d and 4.1.34d above).

(a) there is little doubt that government research contracts provide a hidden subsidy to the academic budget It is doubtful that scientific education can continue at a reasonable level without this kind of support. Furthermore, radical students will certainly ask themselves why support from the Defense Department is more objectionable than support from capitalist institutions - ultimately, from profits derived by exploitation - or support by tax free gifts that in effect contribute a levy on the poor to support the education of the privileged.

- (b) Chapter "The Function of the University in a Time of Crisis" pages 310-311
- (c) In discussing the view that governments should not have direct influence on the school, Chomsky meets an irresolvable problem in the American situation, since costly research in certain areas demands government subsidies which tacitly may influence the choice of research topics. As well, private capitalist organisations use profits derived from the general consumer to foster university education and research. Chomsky concludes that the university is ultimately a parasitic institution and it cannot free itself from the social inequities of its milieu.
- (d) Chomsky's attitudes here are demonstrated in the discussion on the wider context of these citations at 4.1.44c above. He sees no answer to these problems except the answer provided by raising awareness of their existence, in an attempt to lessen their effects.

4.1.46

(a) "The university is located in a permanent position of social influence. Its educational function makes it a crucial institution in the formation of social attitudes."

- (b) Chapter "The Function of the University in a Time of Crisis" page 314
- (c) Chomsky rounds off this chapter by arguing that structural change without changes in attitudes is a vain effort if universities are to be reformed. He quotes here from the Port Huron Statement (1962) of the Student for a Democratic Society. Reprinted in Cohen and Hale's *The New Student Left* this statement supports his argument and is intended to show that universities are essential for political

change since they equip radicals with necessary intellectual skills and allow action to be informed by reason.

- (d) It may be concluded from this extract that Chomsky sees the university's direct educational role as its crucial function, more important than research and certainly more important than meeting the needs of government or industry. His suggestions for serious reform are better detailed elsewhere (see 2.3.1 above).

4.1.47 and 4.1.48

(a) "If in some states of (the United States) the higher educational institutions are also 'free' that only means in fact defraying the cost of the education of the upper classes from the general tax receipts."

- (b) Chapter "The Function of a University in a Time of Crisis" page 316 N.20

- (c) In support of his statement at 4.1.45, Chomsky cites in this footnote a quotation from Karl Marx' *Critique of the Gotha Programme* written in 1875. He shows indirectly that only the form of the levy, on the poor for the education of the rich, has changed and that Marx' criticism is as valid for the contemporary university as Marx perceived it to be in 1875.

- (d) See comments at 4.1.44c above.

4.1.49

(a) He believes that "the control of the population as a whole must be delegated to specialists - to police, priests, owners, teachers, therapists, and so on, with their specialized reinforcers and their codified contingencies."

- (b) Chapter "Psychology and Ideology" page 342

- (c) In this chapter Chomsky sets himself the task of confronting the behaviourist ideas and postulations of B.F. Skinner, and more particularly the recent manifestations of these in Skinner's book *Beyond Freedom and Dignity*. In this citation he quotes from this book which was first published in 1971. After considering and rebutting the scientific status of Skinner's claims, he now turns

to the psychologist's ideas on the design and development of a culture. These ideas centre on employing techniques of operant conditioning, using positive reinforcement rather than aversive reinforcement, with control vested in experts who determine the directions the culture will follow, in their relevant fields, and promote the pursuit of those aims by rewarding appropriate responses. Chomsky indicates that observations of this type have resulted in some readers suspecting that Skinner is advocating a form of totalitarian control. Chomsky goes on to show that the Skinnerian recommendations are equally congenial to both totalitarianism and anarchism, a fact which demonstrates for him the fundamental property of Skinner's science; its vacuity.

- (d) This citation is incidental, including only an accidental reference to education. Chomsky's debate with behavioural psychologists (and Skinner in particular) on the manner of language acquisition has already been mentioned and his attitudes made clear (see 2.1.3 and 2.1.14). Chomsky's attitudes to Skinner's views on how operant conditioning and other behaviourist notions can be applied to education have already been indirectly alluded to elsewhere, especially in his support of Huarte's description of "true education" (see 2.1.1.above).

4.1.50 to 4.1.56

(a) his present position as a teacher
 formal education beyond high school
 don't bother with a college education
Teachers in ghetto schools artists,
craftsmen, teachers what sort of
education he should receive with
 regard to educational practice.

- (b) Chapter "Psychology and Ideology" pages 354 to 362
- (c) Chomsky quotes extensively and verbatim in these pages from his earlier article "I.Q. Tests: Building Blocks for the New Class System" (see 3.3.1 to 3.3.7 above). He seeks to show that the Harvard psychologist, Herrnstein (see also 3.3.1), errs in the same way as Skinner who, Chomsky concludes, has overlooked the possibilities that there may be an intrinsic human need to find productive work, that leisure and liberty may not be "natural" partners and that positive reinforcement of the Skinnerian

type may not be necessary to promote the energetic undertaking and pursuit of productive work. He allows, however, that Skinner would conclude that productive work is its own positive reinforcer, which makes his system tautological in the extreme in Chomsky's view.

(d) See 3.3.1d, 3.3.4d, 3.3.5d, 3.3.6d, and 3.3.7d above.

4.1.57

(a) Bowles and Ginter conclude that I.Q. social class, and education "contribute independently to economic success, but that I.Q. is by far the least important"....

(b) Chapter "Psychology and Ideology" page 368 N.18

(c) Some additional evidence is introduced in this footnote to rebut Herrnstein's arguments (see 3.3.1 above), specifically here his claim that I.Q. is a factor of importance in determining social reward. Chomsky quotes Samuel Bowles and Herbert Ginter's 1972 article "I.Q. in the U.S. Class Structure," and other sources, to show the carelessness of Herrnstein's discussion and more importantly to question the ideological assumption of work so lacking in substance.

(d) There are no new inferences to be gained from this citation.

4.1.58

(a) The accomplishments of the popular revolution in Spain, in particular, were based on the patient work of many years of organization and education.

(b) Chapter "Notes on Anarchism" page 381

(c) Chomsky is making the same point here as he made in 1969 in his *American Power and the New Mandarins* (see 2.2.10 above) using the same example of the popular revolution in Spain.

(d) See 2.2.10d above.

(a) Education, then, must provide the opportunities for self-fulfillment; it can at best provide a rich and challenging environment for the individual to explore, in his own way. Even a language cannot, strictly speaking, be taught

I think that Humboldt would have found congenial much of Dewey's thinking about education

"From the social point of view, the educational systems are oriented to maintaining the existing social and economic structures instead of transforming them."

But Humboldt's concern for spontaneity goes well beyond educational practice in the narrow sense. It touches also the question of labour and exploitation "Whatever does not spring from a man's free choice or is only the result of instruction and guidance, does not enter into his very being, but remains alien to his true nature; he does not perform it with truly human energies, but merely with mechanical exactness."

If man acts in a purely mechanical way, reacting to external demands or instruction "we may admire what he does but despise what he is."

(b) Chapter "Language and Freedom" pages 398-399

(c) In this chapter Chomsky is discussing some of the literature of freedom and relating it to language. He has looked at the libertarian philosophies of Schelling, Rousseau, Kant, Descartes and now Wilhelm Von Humboldt, a philosopher to whom Chomsky admits an intellectual debt of gratitude (see 3.2.5 above). Humboldt's basic philosophical concept is the notion of *Bildung* by which he meant "the fullest, richest, and most harmonious development of the individual, the community or the human race." Humboldt's ideas on education, in essence, parallel Chomsky's, but they relate also directly to Third World revolutionaries and in particular to radical Catholics in Latin America. He quotes in these extracts, which are in turn abridged, from Thomas G. Sander's "The Church in Latin America" in a 1970 edition of *Foreign Affairs*. The source is said to be the ideas of Paulo Freire, a former professor of linguistic philosophy and initiator of adult education literacy programmes in Brazil, Chile and elsewhere. Chomsky concludes that Humboldt's doctrine is classical

liberal, strongly opposed to all but the most minimal forms of state intervention in personal or social life.

- (d) Humboldt, although antedating many philosophers of education, summarises for Chomsky and encapsulates the best ideas from the best liberal philosophies of education. Chomsky's attitudes here are consistent with views expressed elsewhere and inferred in other sections of this work (especially 2.1.1d, 3.2.5c, 3.2.5d, 2.2.22d, 2.2.1d,). In particular Chomsky here would generalise a criticism aimed only at American schools in 2.2.19 above. Educational systems are too concerned with the mere transmission of conservative knowledge and not with the creation of a critical spirit capable of transforming inadequate social and economic structures. Education must focus on producing autonomous individuals, capable of reacting in ways determined by their own interests and energies and power. This relates particularly to education and training for work, where peasants and artisans are elevated to the level of artists if they learn to love their labour for its own sake and are not exploited as instruments to the will of others (see 3.2.11d above). The learning of a native language is achieved by discovery, by awakening in the mind and putting to use those faculties that are native to it. Education, in general, should be approached in this way, with its best manifestation realized by creating an appropriate environment where learning can take place, according to the needs and learning modes of the individual student.

- 4.3 PEACE IN THE MIDDLE EAST? (1974) - first published by Pantheon
- this edition, Fontana 1975

4.3.1.

- (a) "... national autonomy of each people, with exclusive authority in matters of education, culture and language; ..."
- (b) Chapter "Introduction" page 39
- (c) David Ben-Gurion, former Premier of Israel, is quoted in part here, as recorded in Aharon Cohen's book *Israel and the Arab World*. The full extract is recorded in a 1930 internal party discussion. Chomsky uses this statement as precedential basis for his own concept of socialist binationalism in a future Israel, with Jews and Palestinians living together in a democratic, federal state.
- (d) The insight here is a specific and limited one. For Chomsky, as for Ben-Gurion, in an ideal binational or bicultural Israeli state, each nation or culture should be responsible for its own educational arrangements.

4.3.2.

- (a) "a union of Jewish and Arab settlement areas, each of which will be guaranteed autonomy in matters of culture, education, religion, and welfare.
- (b) Chapter "Nationalism and Conflict in Palestine" page 49
- (c) Zalmen Chen, in his "A Binational Solution" article in a 1968 edition of *New Outlook*, is quoted here to illustrate the more tolerant view of the Israeli Jew towards the Palestinians when compared with the American Jewish attitude. The latter regularly overlook the fact that the Jewish colonists have unjustly transformed into a Jewish homeland the territory the Palestinians have lived in for generations.

- (d) See 4.3.1d above.

4.3.4 and 4.3.5

(a) Mayor Teddy Kollek of Jerusalem ... adds, quite properly, that 'if in a few years, the educational and social gaps between Jews and Arabs in Jerusalem do not disappear, some day ... there will be an explosion' ... even in the unlikely event that social, educational, and economic gaps disappear, the 'gaps' in the political rights are in principle insurmountable ...

- (b) Chapter "Reflections on a National Conflict" pages 114-115
- (c) Chomsky quotes Kolleck, as recorded in *Maariv* in September 1971 to show the resistance felt amongst Israelis to a "melting pot" approach to the integration of Arabs with Jews.
- (d) Equality of educational opportunity for the people of both cultures, in a binational community, can promote social harmony. Inequality can militate against it. However, in the specific case of Israel, educational, social and economic equality are inadequate to compensate for politico/legal doctrine which sees Jewishness as a requirement for full citizen rights.

4.5 REFLECTIONS ON LANGUAGE (1976)

- first published by Pantheon
- this edition, Temple Smith 1976

4.5.1 to 4.5.3

(a) It is certainly absurd to argue that children are trained to use the structure-dependent rule, in this case... The only reasonable conclusion is that UG contains the principle that all such rules must be structure-dependent. That is, the child's mind...contains the instruction: Construct a structure-dependent rule, ignoring all structure-independent rules

. ... the scientist...will have to enquire further into UG, to discover what additional principles differentiate the two categories of rules, so that the child can know without instruction that one is structure-dependent and the other not.

(b) Chapter "On Cognitive Capacity" pages 32-33

- (c) Chomsky suggests that insight can be gained into UG (universal grammar see 2.1.3c and 3.2.2c above for discussion on the hypothetical universal invariant principles) by discerning properties in language that can be reasonably assumed to be unlearned. He cites, as an example the principle involved in changing a statement into a question in English. A structure-independent rule, namely one which merely analyses the statement into words and extracts the first auxiliary verb from its content replacing it at the front of the statement to form a question, seems the simple principle required but it is not always appropriate and therefore is not the rule employed by a child. A structure-dependent rule includes as well an analysis into phrases, characterised as "abstract" since they are not physically defined, as such, into phrases. This is the rule the child employs without training, as Chomsky's examples on pages 30-31 demonstrate, even though it is the more complex. It would seem more likely that the child would adopt the easier structure-independent rule, which would lead to the occasional error; but he never does. He unerringly uses the more complex structure-independent rule. It is possible to hypothesize, as a result, that the property which leads the child, without formal instruction, to choose the structure-dependent in preference to the structure-independent is a property of UG (reference 4.5.2 in this extract refers to an "innate instruction"; it is unusual for Chomsky to use the term in this sense)
- (d) Chomsky provides convincing and additional evidence corroborating claims made earlier (see 2.1.7 and 3.2.2) for the existence of innate linguistic universals. By implication, his attitude that there is little value in teaching the grammatical structure of a language to a student in the early stages of acquiring that language are strengthened.

4.5.4 and 4.5.5

(a) We might expect that the procedures used to train apes in forms of symbolic behaviour will succeed as well for humans with severe damage to the neural structures involved directly in language. There is some evidence that this is true with diligent effort and special training people can jump higher and further.

(b) Chapter "The Object of Inquiry" page 41

(c) It is surmised that there is no structure similar to UG in nonhuman organisms, who, presumably, lack the specific neural structure which plays a basic part in language. By training animals in symbolic behaviour, some insight might be gained into the properties of human language, just as training people to jump might give insight into how birds fly; but it would be fatuous to conclude that a point would ever be reached where "symbolic" flying (i.e. jumping) would become "real" flying. Nor can the analogy be used to argue that apes trained to use symbolic behaviour would reach a point where this becomes real language. The physical endowment is lacking in apes.

(d) For people with severe damage to the language centres of their neural systems, there is the possibility of a training being provided which would equip them with the ability to engage in a level of symbolic behaviour. As for apes, however, Chomsky would not regard this as true language acquisition. Nor does training of this type fit his conception of true education (see 2.1.1d above).

4.5.6

(a) See also the report of experiments by E.H. Lenneberg on training of normal humans by techniques used with chimpanzees ...

(b) Chapter "The Object of Inquiry" page 231, No. 9.

(c) This is a footnote to 4.5.4 above.

(d) See 4.5.4d above.

4.5.7 to 4.5.9

(a) It is possible that at an early stage there is use of languagelike expressions, but outside the framework imposed, at a later stage of intellectual maturation, by the faculty of language - much as a dog can be trained to respond to certain commands, though we would not conclude, from this, that it is using language ... As for the further claim that language is not only learned but taught, and that this "teaching" is essential to establishing the meaning of linguistic expressions, this view receives no support on either empirical or conceptual grounds.

(b) Chapter "The Object of Inquiry" page 53.

(c) There are no "primitive subsystems" of human language, although observations of early stages of language acquisition may lead to false conclusions in this regard. The infant's pre-language use of jargon expressions may be a conditioned training, but this is not language and there is no evidence that language is taught or that the meaning of linguistic expressions must be established through a form of instruction.

(d) This is the strongest statement to date by Chomsky confirming his view expressed at 3.2.2d above. Education, within the terms of this work, has no role, as far as can be empirically or conceptually shown, in the development of the basic principles of linguistic competence. As an illustration of the position to which Chomsky is most strongly opposed, see 4.5.16a.

4.5 10 to 4.5.12

(a) The belief that cognitive structures must be taught as well as learned is so widespread that citation is hardly necessary ... "we are

so equipped that we can *inherit* [the complex skills and achievements which constitute the entire edifice of civilization], but only by means of communication:- through teaching, instruction." For some further examples on teaching of language, see notes 38 and 39 below ...

- (b) Chapter "The Object of Inquiry" pages 233-234, N. 26
- (c) This is a footnote to 4.5.7 above. D.D. Weiss in his 1975 article "Professor Malcom on Animal Intelligence" in *Philosophical Review* is quoted
- (d) See 4.5.7d above.

4.5.13 to 4.5.15

- (a) Strawson's belief that this picture is "perverse and arbitrary derives, perhaps, from his unargued assumption that language is consciously taught by conditioning and training and thus is quite different from cognitive or physical structures that develop in the organism by virtue of its nature, under appropriate environmental conditions ... We are dealing here with systems that develop in a natural way as a species of animal instinct ... certainly without any necessity for training and conditioning.
- (b) Chapter "The Object of Inquiry" page 72
- (c) P.F. Strawson in his 1970 *Meaning and Truth* opts for a "theory of communication - intention" on the question of semantics in opposition to the "theorists of formal semantics". Chomsky shows on pages 64 to 71 that there is much common ground between the two stances, but in general he opposes Strawson's position. In particular Chomsky discusses here Strawson's opposition to the formal semanticist's notion that we share rules of language with others as we share an organisation of visual space with them. What Strawson implicitly argues against or overlooks is the fact that the nature of the structures that develop is largely pre-determined by the biologically-provided organisation of the mind.

- (d) Chómsky returns here to his basic position (see 4.5.7d above).

4.5.16 to 4.5.18

(a) Strawson adopts without comment the common assumption, mentioned earlier, that language must be not only learned, but also taught ... "they simply would not acquire ... mastery ... unless they were exposed, as children, to conditioning or training by adult members of a community." He assumes that the "procedure of training" is guided by a concern for the ends and purposes of language "responding vocally to situations in a way which will earn them reward or avoid punishment..."

- (b) Chapter "The Object of Inquiry" page 236, N. 39
- (c) This is a footnote to 4.5.13 above
- (d) See 4.5.7d above. This is the position to which Chomsky is strongly opposed.

4.5.19

(a) It is difficult to imagine that every speaker of English who is capable of the discriminations on which this argument is based has been given instruction or even relevant evidence, to establish the fact.

- (b) Chapter "Some General Features of Language" page 91
- (c) Chomsky takes his argument that the principle of structure dependence must be attributed to universal grammar further (see 4.5.1c above) by investigating a much more complex manoeuvre related to excluding "the principle of subjacency", a manoeuvre so elaborate that it clearly could not be taught, demonstrating that the general principle involved is innate to the language faculty and a part of universal grammar (note: the principle of subjacency requires that transformations apply to positions

at the same level of the cycle or in adjacent levels; it is dealt with more fully in Chomsky's 1973 article "Conditions on Transformations").

- (d) More, cogent evidence is offered here to support Chomsky's already strong view inferred at 4.5.1 above.

4.5.20 to 4.5.23

(a) ... it is difficult to believe that the person developing knowledge of English as a "mental organ" is *taught* the relevant principles. People are not trained or conditioned to treat (32) "on the analogy" of (29) - (31). Rather, they just know that they are to do so, quite without training ...
... If, furthermore, the specified-subject condition and the trace theory are part of universal grammar ... the speaker will know all this without instruction ...

- (b) Chapter "Some General Features of Language" page 103
- (c) Other "conditions", this time the "specified subject condition" and the "trace theory" are analysed here. (these principles are also dealt with more fully in the reference cited in 4.5.19c above). Chomsky concludes that it is unlikely that a learner could be "taught" to recognize a given sentence (32) as senseless, on the basis of seeing an implicit but not obvious analogy with other sentences (29) - (31), on page 101, which are also senseless.
- (d) See 4.5.19d above

4.5.24 and 4.5.25

(a) Recent attempts to teach symbolic systems to apes might give insights into the differential abilities of apes and humans with respect to the language faculty. One suggestive study indicates that global aphasics with left hemisphere damage and severely impaired language ability are trainable by the methods used in the experiments with apes.

- (b) Chapter "Problems and Mysteries" page 246, N. 14
- (c) This is a footnote to a discussion on the uniqueness of the cognitive system required for language learning, on page 159. (see 4.5.4 above)
- (d) See 4.5.4d above.

4.5.26 to 4.5.33

(a) Equally misleading, I think is the tendency in philosophical discussion to speculate on the ways in which language and its use might be taught. Language is not really taught.... noone has been taught the principle of structure-dependence of rules ... Nor is there any reason to suppose that people are taught the meaning of words. It may be true that "teaching someone how to use an expression is the native soil from which talk about meaning has grown" but this historical comment gives little reason to suppose that explanations of meaning are exhausted, or even advanced, by an account of teaching. The study of how a system is learned cannot be identified with the study of how it is taught; nor can we assume that what is learned has been taught.

- (b) Chapter "Problems and Mysteries" page 161
- (c) Chomsky has just shown that linguistics is an intrinsic part of psychology and that psychology defeats its own aims by not treating it as such. (see also 2.1.3 above). Now he uses many of the explanatory analyses already discussed above (from 4.5.1 to 4.5.23) to confront an over-emphasis in philosophy on discerning ways of educating in language. He quotes William P. Alston's 1963 article "Meaning and Use" in *Philosophical Quarterly* to represent the position he questions. He goes on to suggest that parent-child interactions foster language learning.

- (d) These citations restate Chomsky's basic position quite clearly but also add new dimensions. He sees little role for the teaching of meaning. The implication is that the formal study of words as well as grammar in an educational setting is a relatively futile venture, since their meaning is not learned in this manner to any great degree. They must be met in their proper context, not through artificial presentation, and a good example of that proper context is the regular interaction between parent and child. Formal education should aim to create an environment incorporating the assets of the environment in which parent/child interactions take place in order to foster the learning of meaning.

4.5.34

(a) It seems that he is relying on the implicit assumption that when we have described how we might teach, we need no longer ask what is learned.

- (b) Chapter "Problems and Mysteries" page 162
- (c) Following on from 4.5.26 above, Chomsky quotes John Austin's question "What is the meaning of (the word) rat?" and agrees an answer can be taught. This answer will not, however, tell us all we might reasonably want to know about the word. Austin overlooks the state of the system that is activated by the word itself, which has many more characteristics than can be articulated with ease.
- (d) Repeated, diverse and regular exposure to words, largely through uncontrived interaction with other users of the words, but also of course through the vicarious interaction provided through literature, is the real avenue to language learning. It is thus distinct from language teaching.

- (a) Noting that other systems are learned "untaught" ... one would naturally proceed as outlined earlier in each such domain: ... nor does he give any argument for his beliefs apart from the observations that many skills and competences are learned untaught, from which we can conclude only that a theory that presupposes teaching is wrong.
- (b) Chapter "Problems and Mysteries" page 173
- (c) Robert Schwartz has proposed in his 1969 article "On Knowing Grammar" that it is "implausible" to suggest quite different innate schemata for the various skills and competences that have been identified as properties of the acquired system of language. He offers no argument to confirm this doubt, although there are some obvious "reasons" for doubting the existence of an undifferentiated theory of language learning. His only argument is itself a truism, as far as Chomsky is concerned.
- (d) Chomsky's view that language is largely acquired untaught is now so strong an attitude that, on the basis of the evidence, he regards it almost as a self-evident truth.

4.6 RELEVANT PUBLISHED PAPERS (1973-1976)

4.6.6 and 4.6.7

(a) The central concern of the grammarian is free creation, and at a deeper level, the problem of how the structures of grammar "come into existence in the mind of the speaker" who is not taught grammatical rules "and yet without any grammatical instruction, from innumerable sentences heard and understood...will abstract some notion of their structure which is definite enough to guide him in framing sentences of his own..."

(b) "Questions of Form and Interpretation"

Linguistic Analysis 1(1) 1975, page 75

(c) Chomsky reflects on fifty years of linguistic inquiry. He paraphrases and quotes here Otto Jespersen's 1924 *The Philosophy of Grammar* where Jespersen mooted that it is an unconscious "notion of structure" that "guides" the speaker. This is a position very close to Chomsky's which he has defended in his *Reflections on Language* chapter 4.

(d) Grammatical structure, as with other areas of linguistic competence, is abstracted in the mind of the learner from exposure to innumerable sentences heard and understood. It is not, however, learned from them.

4.6.9 to 4.6.11

- (a) Russell had quite a number of things to say on educational topics... [some] very interesting and provocative ideas in the field of educational theory and practice ...the primary goal of education is to elicit and fortify whatever creative impulse man may possess.
- (b) "Towards a Humanistic Conception of Education" in Feinberg and Rosemont, Work, Technology and Education 1975, page 204.
- (c) See 3.2.1 and 3.2.3 above
- (d) See 3.2.1d above

4.6.12 to 4.6.16

- (a) ...he argued that education should be guided by "the spirit of reverence" for "something sacred, indefinable, unlimited, something individual and strangely precious, the growing principle of life, an embodied fragment of the dumb striving of the world." This is one view of the nature of education based on a certain conception of human nature that Russell called the humanistic conception... the goal of education should be to provide the soil and the freedom required for the growth... to provide, in other words, a complex and challenging environment that the child can imaginatively explore...this approach is governed by...reverence for the precious, varied individual ...and humility with regard to aims and with regard to the degree of insight and understanding of the practitioners...he was well aware of how little we really know about the aims and purposes of human life. Therefore the purpose of education... cannot be to control the child's growth to a specified predetermined end...rather the purpose of education must be to take its own individual course, and to facilitate this process by sympathy, encouragement, and challenge, and by developing a rich and differentiated context and environment.
- (b) See 4.6.9b above, page 205

- (c) Chomsky defines the aim and purposes of the humanistic conception of education by referring to Russell's view's on the matter and adopting them as his own. He gives no specific references for quotations made directly from Bertrand Russell's works.
- (d) Educationists must appreciate and focus on the uniqueness of the growing child, its subtlety and complexity, its capacity for growth in any directions and the need not to define these directions for the child. There is a creative impulse intrinsic to the child's nature which education should aim to foster and nourish by providing an appropriate environment, but an environment which can be modified and whose boundaries are flexible. No long-term aims for the child's development can be set, since we know too little of the aims and purposes of human life to adopt so authoritarian a stance. The child must be encouraged to discover for himself, following his own growth impulse within the flexible bounds of the sympathetic and challenging environment created for him. (see 3.2.5 d above)

4.6.17 to 4.6.19

- (a) This humanistic conception of education clearly involves some factual assumptions... If these assumptions...prove to be incorrect, then these particular conclusions with regard to educational theory and practice will not have been demonstrated...if these assumptions are indeed correct much of contemporary American educational practice is rationally as well as morally questionable.
- (b) See 4.6.9b above, page 205
- (c) The assumption that the creative impulse is central to the nature of man cannot be proven or falsified. If the assumption is invalid, the humanistic conception of education is invalid; if valid - a viewpoint strongly held by Chomsky - then much of contemporary educational practice is questionable.

- (d) Chomsky's attitude as expressed elsewhere (passim) is that "much of contemporary American educational practice is rationally as well as morally questionable."

4.6.20

(a) The humanistic conception of man leads to what might be called libertarian educational theories.

- (b) See 4.6.9b above, page 206
- (c) This excerpt leads into a discussion of libertarian concepts of social organisation and especially the related concept of the nature of work (see 3.2.6, 3.2.10, 3.3.3 and 3.3.5 above)
- (d) See 4.6.20c above

4.6.21 to 4.6.23

(a) On this conception of human nature the goal of education should be to train children ... [and] fit them for the productive mechanism... Such an idea is of course repugnant...but it bears repeating that between these contrasting views of work and education there is a factual judgement involved with regard to intrinsic human nature.

- (b) See 4.6.9b above, page 207
- (c) The assumption that work is repulsive and leisure attractive is examined. (See 3.3.1 and 3.3.5 above)
- (d) See 4.6.21 c above

4.6.24 and 4.6.25

- (a) It may be that the humanistic conception expressed by Russell... is wrong. I believe it is correct, but in either case there are direct consequences with regard to social organisation as well as education... I want to suggest a connection between the concomitant view of human nature - specifically with regard to creativity and productive work - and certain questions concerning educational practice : namely, whether it should be oriented toward freedom and challenge or toward guidance, direction and control.
- (b) See 4.6.9b above, page 207
- (c) Ignoring the assumption mentioned at 4.6.21c above, Chomsky makes a total commitment to the humanistic conception of education, to the view of human nature which it assumes and to the questions for educational practice it implies.
- (d) Chomsky's commitment to the humanistic conception is complete.

4.6.26 to 4.6.32

- (a) ...Wilhelm von Humboldt... wrote about educational practice...along the lines of the humanistic conception... "Whatever...is only the result of instruction and guidance...[man] does not perform it with truly human energies..." This view has implications for educational practice... Humboldt was an important educational theorist as well... ...these views involve questions of fact concerning human nature, and...there are certain conclusions that one may draw from these factual judgements with respect to educational theory and practice... ...The acceptance or rejection of the null hypothesis has political and social as well as pedagogic consequences for the educator and teacher.
- (b) See 4.6.9b above, pages 208-209

- (c) These references and Humboldt's views are discussed in a similar context at 4.1.59 above. Chomsky warns that in the absence of evidence on these issues (i.e. relating to questions of fact concerning human nature), judgments are usually made according to ideological commitment. It would be better to apply the null hypothesis, in the absence of evidence, and assume a stance of caution, humility and reverence, as in Russell's conception, when approaching education, accepting our dearth of knowledge.
- (d) For Humboldt's views see 4.1.59d above. One's thinking or lack of thinking, as a professional educator, about these issues, and one's acceptance or rejection of the implications of the null hypothesis have profound consequences for professional responsibility and attitudes in education.

4.6.33 to 4.6.36

(a) ...consider the matter of control of behaviour. In a certain sense this will be abhorrent to the person who accepts the humanistic conception of education... It is fairly clear that language cannot be seriously regarded as a system of habits and skills acquired through training.

And if, in fact, the humanistic conception of human nature, work and education mentioned earlier is correct then the theory of conditioning may be a dangerous and possibly pernicious dogma... "instruction and guidance does not enter into his very being..."

- (b) See 4.6.9b above, pages 209-210
- (c) As language is not acquired through conditioning, so it is probable that learning does not extensively result from conditioning, since the study of stimulus and response ignores the relation between stimulus and response; the experience, maturational processes, accumulated knowledge and belief already resident in the mind of the subject. He in turn will respond individually and indeterminately to stimuli aimed at conditioning his behaviour. The belief that conditioning is an important feature of learning theory may be true,

but it is yet only a dogma and it ignores Humboldt's warning. There is some evidence that voluntary action plays a very significant role in learning and acquiring knowledge.

- (d) The attitudes expressed here are consistent with earlier inferences (see especially 2.1.1., 2.1.3 and 2.1.14 above) His views here and the evidence he hints at, but does not cite, in relation to free-will-inspired action, have great implications for the psychology of education and learning theory in particular.

4.6.37 to 4.6.40

- (a) Consider a teaching program for geometry...To educate a mathematician, you do not train him to face problems which are just on the border of what he has already learned to do...Programs that work quite successfully in teaching some fixed domain through small incremental steps may precisely deprive persons of the opportunity to develop these poorly understood abilities that enable them to act in a normal human fashion, occasionally with genius...
- (b) See 4.6.9b above, page 213
- (c) The idea that knowledge is acquired in small, incremental steps, as through programmed learning, and that therefore teaching should be organised in that way, is disputed. By depriving the student of relatively complex problems, unrelated to the skills and knowledge that he has achieved and acquired, he is also deprived, quite plausibly, of the experience necessary to develop imagination and creativity and sometimes genius.
- (d) Again there are implications in these views for learning theory and the psychology of education.

4.6.41

(a) (On the humanistic conception of education, it is important to provide the richest and most challenging of environments for children... and a well-planned school should be able to provide just that environment).

(b) See 4.6.9b above, page 213

(c) Chomsky agrees with the views of Goodman and Illich only to the extent that the schools should be changed to provide an appropriate environment, not that they should be eliminated.

(d) See 4.6.41c above.

4.6.42 to 4.6.48

(a) An approach to education which emphasises such values as punctuality and obedience is very well suited for training factory workers as tools of production...It is not suited at all to... educational practices that give due regard to intrinsic human capacities.

The consideration of assumptions of this kind is particularly important in a rich and powerful country with immense potential for good and evil... the responsibility of the teacher to the student... is beyond calculation but it is further amplified to the extent that this child can affect history ...There is also a teachers' edition which goes along with the paper, which explains how the teacher is supposed to elicit the appropriate answers.

.....

Children have to be spared indoctrination but they also have to be trained to resist it later in life.

(b) See 4.6.9b above, pages 214 to 216

(c) Some of the values implicit in contemporary education, which Chomsky, within the terms of his conception, sees as miseducative, are discussed. The teacher and his approaches in a developed, powerful country are especially important since his students may shape world history (see 3.2.12 above). Discussion on commonly-used textbooks leads to the conclusion that American

children are being indoctrinated in attitudes to the Vietnam War in line with official American policy. This type of mind-shaping education must cease and be replaced by an education which enables the child to see through attempts at indoctrination, as he matures.

- (d) See 4.6.42c above

4.6.49 and 4.6.50

(a) The schools to a large extent are training professionals, and they are training the general population to accept the values and the ideological structures that are developed by professionals.

- (b) See 4.6.9b above, page 218

- (c) The-intelligentsia in a "post-industrial" society are increasingly associated with the exercise of power. This is the result of a new coercive ideology which seeks to remove decision-making even further from popular control. With the removal of emotional and moral factors from the educational training of these professionals, they are, as a result, divorced from the company of reasonable persons whose decisions are based on a form of reason which decides rightness by taking into account emotional and moral factors.

- (d) See 2.2.1d above

4.6.51 to 4.6.54

(a) All of these are matters that require the most careful attention of teachers... We have to adopt this questioning and iconoclastic approach as teachers... ...There is also a positive side, one that should make the work of teachers particularly demanding but highly exciting...the possibility, perhaps for the first time in modern history, to free human beings from the activities that, as Adam Smith pointed out, turn them into imbeciles through the burden of specialised labour... And

it is the responsibility of teachers...
to liberate the creative impulse and to
free our minds and the minds of those
with whom we deal from the constraints
of authoritarian ideologies so that this
challenge can be faced in a serious and
open-minded way.

- (b) See 4.6.9b above, pages 219-220.
- (c) These are concluding admonitions and a summary.
- (d) A humanistic conception of education must remove the blinkers, shatter idols, liberate individual creativity, and rebut authoritarian ideologies.

PART FIVE

"CHOMSKY ON EDUCATION"

- A COLLATION OF ATTITUDES

5.1 THE NATURE OF EDUCATION

For *true education* to exist, a higher level of intelligence than simply *docile wit* is required in the learner. Students are required who, assisted by the catalyst of the subject alone, can produce a range of independently devised and novel associations because their intelligence is capable of generating new thoughts which are expressed in a form quite distinct from any training or experience. Ideas and principles, not provided by training, must be resident in the intellect. *True education* excludes the beast. Its practice is unique to man.¹

An acceptable notion of the true nature of education is the humanistic conception of education. This recognises a creative impulse intrinsic to the child's nature which education fosters and nourishes by providing an appropriate environment, but an environment which can be modified to suit the child's creative impulse, and whose boundaries are flexible.²

Good education is liberal and liberating. It touches on the full range of human endeavours, experiences and potentialities. *True education* is non-coercive. It is socially transforming.³

Education is a social phenomenon which does not require institutions or the influence of institutions for it to take place. It is practised by all those who process and disseminate information and shape social policies at the individual or group level.⁴

Education is best manifested in a situation where educators and students share the same social conditions, with other basic services supplied along with or as a part of the educational process.⁵

There is little that can be directly taught to facilitate the learning of a native tongue. It is unlikely that even the idiosyncratic elements of a language are taught. Education, then, within the terms of this work, has no role, as far as can be empirically or conceptually shown, in the development of the basic principles of linguistic competence. Notions that people simply would not acquire mastery of a language unless they were exposed as children to deliberate and purposeful education, responding vocally to situations in a way which earns them reward or punishment, are incorrect and inadequate explanations of language acquisition.⁶

The teaching of the grammatical structure of a language to a child in the early stages of acquiring that language has little value. Nor does the teaching of formal grammar in school with a view to improving speech performance serve any useful purpose, apart from confirming the knowledge already possessed by the student prior to being trained in what is no more than the articulation of the rules. If the ability to utter the rules of grammar is discerned as a desirable aim of education, then, in relation at least to speech performance, it is only a desirable aim for its own sake.⁷ There is strong evidence to demonstrate with reasonable certainty the validity of these claims.⁸

There is little role in education for the deliberate teaching of meaning. The formal study of words, like the formal study of grammar, in an educational setting, is a relatively futile venture. Meaning is not learned to any degree in this manner. Words must be met in their proper context, not through artificial presentation, and a good example of that proper context is the regular interaction between parent and child. Formal education should aim to create an environment incorporating the assets of the environment in which parent/child interactions take place, in order to foster the learning of meaning.⁹

A docile wit is not enough for the development of true language. The child does possess the ability to produce a range of independently devised and novel associations, and ideas or principles not provided by training are resident in the intellect. For these reasons the symbolic "language" taught to animals and which could be taught to people with severe damage to the language centres of the neural system,

,is not true language, nor is this "teaching" *true education* since it is practised on the *docile wit*.¹⁰

There is sense in discouraging rote practices in the teaching of reading and in encouraging adult literacy programmes where the needs exist.¹¹

The real avenue to *language learning* is via repeated, diverse and regular exposure to language, largely through uncontrived interaction with other users of the language, but also of course through the vicarious interaction provided through literature. This is distinct from *language teaching*. Jespersen's view, that it is an unconscious "notion of structure" that "guides" the speaker, has merit since the learning of a native language is achieved by discovery, by awakening in the mind and putting to use those faculties that are native to it. This is a consistent view which betrays no shifts in attitude apart from a gradual strengthening on the basis of confirmatory evidence, to the point where it becomes an almost indisputable tenet.¹²

The claim that knowledge of one language can be used for giving instruction in another overlooks certain important difficulties. What can be transferred via second language instruction are the relatively basic grammatical features manifested in surface structure and not the relatively elusive features related to deep structure and related to the transformations which operate upon deep structure to produce surface structure. Only the barest introduction to the grammatical structure of a second language can be offered using the arts of the pedagogue. It is probable that a *linguistic competence*, which is innate in all humans, may well explain the proficient learning of a second-language, as it does the native language. This proficiency, when it is achieved, may well occur in spite of the efforts of teachers, not because of them.¹³ There is convincing evidence available to show that there is little value in teaching the grammatical structure of a language to a student in the early stages of acquiring that language. It is reasonable to apply this evidence to both native and second language acquisition.¹⁴

As a direct corollary of the above, questions must be raised about the value of the following educational activities: the teaching of a foreign language using approaches which never progress beyond a consideration of surface structure; the teaching of languages, beyond an elementary introduction, where there are no opportunities for students to immerse themselves with continuity and diversity in those second languages; the teaching of a language in isolation from the culture which shapes it and which may play a part in elaborating the idiosyncratic elements which may not be found in the native language of the second-language learner; and instruction in foreign languages by teachers who themselves have a grasp of their teaching language only at the surface structure level. Also, as a corollary, the proposition can be made that second languages are most effectively learned by children passing through that same critical period, in the early years, when *linguistic competence* is manifested in *linguistic performance*. This *language learning* is distinct from *language teaching*.¹⁵

The factual knowledge of a language transmitted in hundreds of hours of direct instruction is insignificant when compared with the knowledge of a language the student already possesses. Underlying and innate *linguistic competence* is much more important than the hours

of direct method instruction in contributing to a student's performance. If there is no rich, non-artificial and incidental exposure to a second language available, and if second-language learning is to be a goal of the curriculum, then concentrated and regular instructional exposure to a language may foster the acquisition of that language since inherent in such a concentrated and continuous programme would probably be, at least, some incidental exposure to the language's deep structure. Such a programme, to be effective, however, would need to avoid use of the methodology of programmed learning and conditioned-response rote-learning, lest the student fail to progress beyond the mere grasp of surface structure.¹⁶

The teaching of the vocabulary of a second language, using only meaning-equivalences with the native tongue, may be an inefficient and misleading practice. Words must be met in their proper context for full semantic appreciation. The meaning of words in a language cannot be separated from the idiosyncratic grammatical features of that language.¹⁷

There is a danger that education for work will train current and future workers into a state of quiescence, which will enable their protests at injustices and illiberalisms to be dissipated. This form of instruction is not *true education* since it must be practised on the *docile wit* for it to be successful. Humboldt's sentiment here is appropriate. *Whatever does not spring from a man's free choice... does not enter into his very being, but remains alien to his true nature; he does not perform it with truly human energies, but merely with mechanical exactness.* The corollary is that training should be provided for workers which alerts them to the risks of manipulative processes inherent in their training and their work situation.¹⁸

Further education has a function outside the production of artisans and clerical employees. Technical education, as a part of further education, must equip its students with the personal resources of character and leadership which will be required when democracy is extended and worker control in industry and commerce becomes a reality. The hiatus between traditional management and worker management must be immediately filled by especially trained workers if there is to be no chaotic breakdown of production.¹⁹

Education must focus on producing autonomous individuals capable of reacting in ways determined by their own interests and energies and power. There is an assumption by some that people should be trained to fit the productive mechanism and that this should be the goal of education. This assumption is repugnant. It is based on the incorrect, further assumption that work is repulsive to man by nature and leisure attractive, an assumption which is common to capitalist ideology and the behaviourist view of human beings. The assumption that people will work only for gain in wealth and power, rather than for the intrinsic reward inherent in the work itself, ignores the fact that intelligent people do not bypass formal education and move into salaried positions where wealth is more rapidly and sooner accumulated.

They undertake further education with the aim of securing a relatively interesting (and perhaps poorer-salaried) work situation. As a result, further education as well as providing the job skills required by artisans, clerical and agricultural workers, should elevate the workers' regard for the value implicit in the work they do, so that they themselves are elevated to the level of artists who love their labour for its own sake and are not exploited as instruments to the will of others.²⁰

The scholarly integrity of the intellectual community must be protected by a strong commitment to notions of academic freedom. University independence must be secured as much as possible against trends which degrade universities to the level of private commercial corporations rather than upgrading them to communities of scholarship. A betrayal of academic freedom by scholars themselves can be motivated by the following: access to money and influence; mono-ideology; obsession with problematical trivia characteristic of professionals; and the drive of behavioural scientists, in particular, towards experimenting on anything and everything, regardless of results in human terms. The dangers are real and cannot be removed completely, since costly research in certain areas demands government subsidies which indirectly may influence the choice of research topics, while private capitalist organisations use profits derived from the general consumer to foster university education and research. Therefore the university is irresolubly a parasitic institution, a problem for which no answer can be provided except that offered by raising awareness to the risks involved in an effort to mitigate them.²¹

A university has a profound responsibility for the moral conscience of a society. Not only does it train society's future leaders, who have a great influence for good or ill, but academics themselves must be directly involved by assuming a *subversive role* in regard to any ideological, intellectual elitism whose disguised goal may be self-interest and dominance in society. Academia should be wary of providing the resources and the propagandists for questionable programmes, especially when used in direct and unquestioning support of government policy. Such provision is morally inappropriate. Tertiary educators and their students are justified in providing the visible, non-violent support for any reasonable cause which questions and combats insensitivity to human needs.²²

For the individual student a long term purpose of higher education is to enable him to secure for himself a relatively interesting work situation, a purpose which outweighs, in the minds of most people, the goal of achieving mere material reward through advanced, educational qualifications. For the society, a welcome development is the assumption by the university of a headquarter's role, as the centre of social, political and intellectual life. This is essential in a society which is otherwise largely depoliticised and lacks other realistic, alternative, focal points.

For universities to fill this role, changes of the type described below will have to be forthcoming.²³

Changing the structures in university education is pointless if the processes and attitudes of those within the structures remain unchanged. The following things in universities have great value; the content of the curriculum; the interaction between student and teacher; the nature of research; and the practice that relates to theory. If reforms are to be practical they must relate to these areas.²⁴

The competition and secretiveness fostered in higher education is miseducative since it patently does not prepare the student for the life of a scholar, a scientist or a teacher, who must share the benefits of their work. Cooperative attitudes must be fostered by changing the style of university regulations, course projects and examinations in order to eliminate emphasis on competition. Doctoral dissertations should not be constrained too rigidly to individual contributions, to fixed time-spans, to limited goals and to conventional, unspeculative subjects for investigation. Triviality in research will result from such constraints, and, as a result, scholars may devote their careers to trivial modifications of work already done. Variety and creativity are stifled in the long run.²⁵

The university's direct educational role is its crucial function as far as society is concerned, more important than research and certainly more important than meeting the needs of government or industry. Its teaching function must not be neglected but must have, as an important factor in deciding directions, an eye to social relevance. A maintenance of social perspective in designing tertiary syllabuses is needed and this perspective should be critically examined by those undertaking the teaching and by the students themselves. Priorities ought to be ranked according to general social goals. Graduate students, as a continuing part of the teaching/learning process, should be encouraged to defend the significance of the field of work in which they are engaged and face the challenge of a point of view and a critique that does not automatically accept the premises and limitations of scope that are to be found in any discipline. University philosophers are well equipped for this function and are encouraged to practise it, in particular, with students in the social and behavioural sciences.²⁶

5.6 EDUCATION IN DEVELOPING COUNTRIES AND EDUCATION FOR LIBERATION

Education has a change-agency role and can be effective, over a period of time, in producing a new political consciousness which will lead to liberation. The task of a *liberal education*, as well as providing a multifaceted curriculum, must also be to liberate the physical man, his intellect and those things which he touches upon.²⁹

The aims of education in developing countries should centre on national consciousness-raising. A primary purpose is the raising of the critical faculties of the population to an awareness of economic exploitation and cultural oppression by foreign nations and indigenous *elites*. Educational policies and objectives deserve little respect if they merely serve economic aims, especially the economic aims of foreign capital. This disrespect applies to policies maintained in any country subject to economic exploitation by foreign interests. The development of racial and ethnic harmony, individual self-esteem and initiative, and social awareness are all integral aims which must be identified. In a binational or bicultural state, each nation or culture should be responsible for its own educational arrangements, with equality of educational provision ensured for both cultures since this can promote social harmony in a bicultural society, while inequality can militate against it.³⁰

The most effective education comes from those who live and work with the people, supplying other basic services at the same time, because the aims then are immediate and local, not foreign and remote. The least effective education is that provided by elitist governments, submissive to foreign powers, who cannot or will not provide what is necessary. Textbooks can emphasise hygiene and better agricultural practices, and should generally focus on issues relevant to the students' lifestyles. Education should be carried out in the vernacular and must focus on the local culture if it is to have a liberated and liberating style. Levels of excellence in functional subjects must be raised. Adult literacy programmes must complement the work in the schools for children and these, and all education, must be equally available without discrimination. More than just primary education must be offered. Secondary education, which can foster the powers of critical analysis in a population, needs concentrated attention. It should not be used merely to train future bureaucrats, 'a service-class inculcated with a consumer-based value system.'³¹

Psychology, seen in its behavioural form, lacks a notion comparable to *linguistic competence*, since it is outside the conceptual boundaries of behavioural psychology to even consider the possibility of an abstract arrangement underlying behaviour, consisting of rules which determine the form and intrinsic meaning of an infinity of sentences. Psychology could be of great benefit to education if it ceased limiting itself only to investigations into S-R and operant reflexes, associations and dispositions; the concrete and simple rather than the complex and abstract; and focussed its research on elaborating the system of underlying competence in the language domain of human intelligence.³²

There is an undesirable and harmful tendency in recent research in educational psychology towards reaching "firm" conclusions in matters such as learning theory and language, while the abstractions and the important and complex issues are often excluded as non-measurable, therefore non-scientific, therefore irrelevant. There is reason to fear the influence such *value-free* findings will have on teachers and students. The former may passively accept the authority of the social and behavioural sciences because their findings can be computer programmed, while other, overlooked but important variables, such as the categories in which war protests are formulated (shame, indignation, honesty) cannot be programmed and measured. Critical analysis, by philosophers and others within universities, of the application of behavioural science to education is needed.³³

Direct instruction in any matter, with motivation and free-will absent, promotes a non-human mechanicalness which should not be the fruit of true education. The claims of behavioural psychologists - B. F. Skinner in particular - and their recommendations about applying techniques of operant conditioning and other notions to education have no valid status, empirically or conceptually. As language is not acquired through conditioning, so it is probable that learning does not extensively result from conditioning, since the study of stimulus and response ignores the relation between stimulus and response, a relation akin to *linguistic competence*; which is abstract and includes the experience, maturational processes, accumulated knowledge and belief already resident in the mind of the subject. The belief that conditioning is an important feature of learning theory may be true, but it is yet only a dogma.

On the contrary there is evidence that voluntary action plays a very significant role in learning and acquiring knowledge. Furthermore the behaviourist idea that knowledge is acquired in small, incremental steps, as through programmed learning, and that therefore teaching should be organised in this way, is doubtful and debilitating. By depriving the student of relatively complex problems, unrelated to the skills and knowledge already possessed, he is also deprived, quite plausibly, of the experience necessary to develop imagination, creativity and sometimes genius.³⁴

IQ testing and IQ scores have only value at the individual level, perhaps for comparing a student's individual achievement with a rough measure of potential. The IQ scores of any student's parents should not affect educational practice relevant to that student.³⁵

The act of educating, itself, is a political act. Education and politics are inseparable. Education extends far beyond the institution and the range of direct influence of the institution. Politicians, public figures and the mass media are engaged in political education. Any political persuasion promoted through the institution of education is legitimate provided it remains a *reasonable propaganda* and does not become simple indoctrination. A *propaganda* based on *reason* is benign. Education must concern itself with the creation of a critical spirit capable of transforming inadequate social and economic structures.³⁶

Political indoctrination by methods of instruction and the persuasive use of guilt or group pressures is to be condemned. These are coercive techniques, practised on the *docile wit* and thus are not *true education*. Indoctrinatory training processes propagating the ideologies of governments are incompatible with freedom. The centralisation of control, particularly in mono-ideological states, acts against the interests of democratic participation. This centralisation of control must diminish for ideological indoctrination, which poses as education, to disappear and for greater ideological diversity to arise.³⁷

Even where education is supposedly free from political indoctrination, there exists a hidden curriculum of persuasion which must be countered. Where education is seen as primarily serving economic aims, these risks are the greatest. The intelligentsia in an advanced or post-industrial society exercise increasing political power. This is the result of a new coercive ideology which seeks to remove decision - making even further from popular control. The form of education provided for those moving into professional and influential positions must be examined since it is clear that "*highly educated*" policy makers have been responsible for monstrous crimes in foreign policy in recent years. The education institution in a developed, powerful country is especially important since its graduates may shape world history. The type of education which allows commonly-used textbooks surreptitiously to indoctrinate children in attitudes which match official, government policy must cease.

It must be replaced by an education which enables the child to see through attempts at indoctrination. Education must promote a critical understanding. This power of analysis should be based on reason, which consults emotional and moral factors, as well as objective data. Only then, through political education, will authoritarian ideologies be rebuffed. In a depoliticised society, the university, by default, should become the centre of political life.³⁸

5.9 CURRICULUM DESIGN AND METHODOLOGY

The content of the curriculum is *the first item* of importance in any educational programme. Even so, educational systems are too much concerned with the mere transmission of non-dynamic knowledge and too little concerned with the development of analytical powers, a critical spirit.

The creation of an appropriate environment where learning can take place is also stressed as *the first item* of importance in any educational programme. There is no contradiction here, however. The environment developed in education, if matched to the needs and learning modes of the individual student, represents the content of the curriculum. The environment is the curriculum.³⁹

Methods of direct instruction must be kept to a minimum since these are outside *true education* if motivation and free will are absent. Competition and secretiveness need to be eliminated. In their place cooperative attitudes should be fostered so that these traits may be manifested by the student later in life and gradually become commonly-accepted social traits. In order to foster cooperative attitudes, it may be necessary to block out the constant pressures of a competitive society where the pursuit of self-interest is the norm. The school need not reflect this low-level value and should avoid inculcating it in students. As a logical conclusion of the little we know about the nature of man, no long-term aims for the child's development can be set. He must be encouraged to discover his directions for himself, following his own growth impulses within the flexible bounds of the sympathetic and challenging environment created for him.⁴⁰

The pendulum in curriculum design has moved too far in one direction since it has produced, in over-supply, an elite of *liberal experts* who profess to analyse problems in a scientific, value-free language and who scorn human reactions based on emotional and moral grounds. "Firm" conclusions reached in matters of learning theory, where important but non-measurable variables have been excluded, have contributed to this situation by "justifying" a one-dimensional, pragmatic, educational curriculum. The balance must be reestablished by swinging the pendulum back to those disciplines which reflect truly human, emotional and moral concerns; the literary, romantic and classical, rather than the scientific, technical and immediate.

As well the physical sciences need to be offered to students along with the social and behavioural, since the former lend a necessary brake to the wilder tenets and zealotry of the latter.

The social and behavioural sciences should be studied, not only for their intrinsic interest, but so that the student can become aware of exactly how little they have to say about the problems of man and society that really matter.

One method of increasing moral and political awareness is to include in curricula the objective study of *national scandals of the past*. This would promote an objective, public consideration of contemporary policies.⁴¹

The curriculum should focus on the local culture and community. Education in the vernacular is essential. Political education is a desirable part of any curriculum.⁴²

Contemporary educational policies are rationally as well as emotionally questionable. The views of Goodman and Illich, in regard to eliminating schools, are correct, up to a point. Schools, as they are, should be eliminated. Schools must be changed to provide an appropriate environment for learning.⁴³

Educational policies should be objective in regard to government policies. Educational resources must not be used in direct, unquestioning support of government policy. Nor should policies be directed towards, or grow from, mere economic aims.⁴⁴

Policies should be directed towards producing an education which is anti-elitist in availability, with discrimination against rural areas, women, illiterates or any other social group removed. In particular, in a society where there is great inequality in wealth and power, schools in ghetto areas often discourage positive qualities in children and develop implicitly, in lieu of such qualities, beliefs and dispositions that are highly miseducative. Policies must positively discriminate against this tendency. School policies should not promote educational conservatism, or seek to maintain the status quo or an ideological consensus in society.⁴⁵

If Bertrand Russell's philosophical programme for world improvement is to be seen as an achievable aim, educational policies must be directed towards the creation in other men of a similar concept of social organisation, based on humane, libertarian principles.⁴⁶

Education should concern itself with taking cognizance of the innate capacities of the wit. Because we know so little about these capacities and the nature of man itself, educational judgements which affect these things must be taken with care and respect. The primary goal of education is to elicit and fortify whatever creative impulse man may possess.⁴⁷

Education should aim to be a powerful force in shaping and changing community attitudes and values over a period, for militating for or against economic, social and political policies by raising the level of evaluative consciousness. Sane and humane ordering of a society, in its internal and external dealings, can be fostered by balancing the quality and style of the education available to its members. Education should be provided for all of a type which produces reasonable persons whose decisions are based on that form of reason which decides rightness by taking into account emotional and moral factors, as well as objective evidence.⁴⁸

There is good reason for education to commit itself fully to the humanistic conception of education. This attempts to give a sense of the value of things, apart from domination, and seeks to create wise citizens of a free community. Humboldt's vision of an education which promotes *the fullest, richest and most harmonious development of the potentialities of the individual, the community or the human race* has great merit. A society which strongly opposes all but the most minimal forms of state intervention in personal or social life can grow from such an educational philosophy, a philosophy which explicitly encourages education to focus on producing autonomous individuals, capable of reacting in ways determined by their own energies and interests and power. For this to occur educationists must appreciate and focus on the uniqueness of the growing child, its subtlety and complexity, its capacity for growth in any directions and the need not to define these directions for the child. The null hypothesis must be applied in the absence of evidence about the child's aims and potentialities. A stance of caution, humility and reverence must be assumed, accepting our dearth of knowledge and deciding not to interfere with what we do not understand. Professional responsibility depends upon one's thinking

about these issues. If they are not considered, educationists forego their professional responsibility. *On the humanistic conception of education it is important to provide the richest and most challenging of environments for children and a well-planned school should be able to provide just that environment.*⁴⁹

A humanistic conception is liberating for the undefined creative impulse, liberating for the physical man, iconoclastically liberating for society and can free the world from evil and authoritarian ideologies.⁵⁰

5.12 THE CONGRUITY AND GENESIS OF CHOMSKY ON EDUCATION

Considerable congruity can be discerned in Chomsky's attitudes to education whether these are deduced from his academic or his polemical writings. The consistency of cross-referencing in the preceding sections of Part Five, with comments and evidence for many attitudes drawn from both the academic and polemical strains of his work, gives evidence for this congruity. This fact begs the question: which strain of interests is dominant in shaping Chomsky's attitudes to education, the researched academic or the politically polemical? The writer's informed deductions are that the one is antecedent to the other; that Chomsky's attitudes to education have developed as demonstrated in figure one below, if not chronologically at least in a rational sense;

that his work in linguistics is the major factor in shaping his views on education; and that these together have helped to shape his more polemically expressed views on social and political matters.

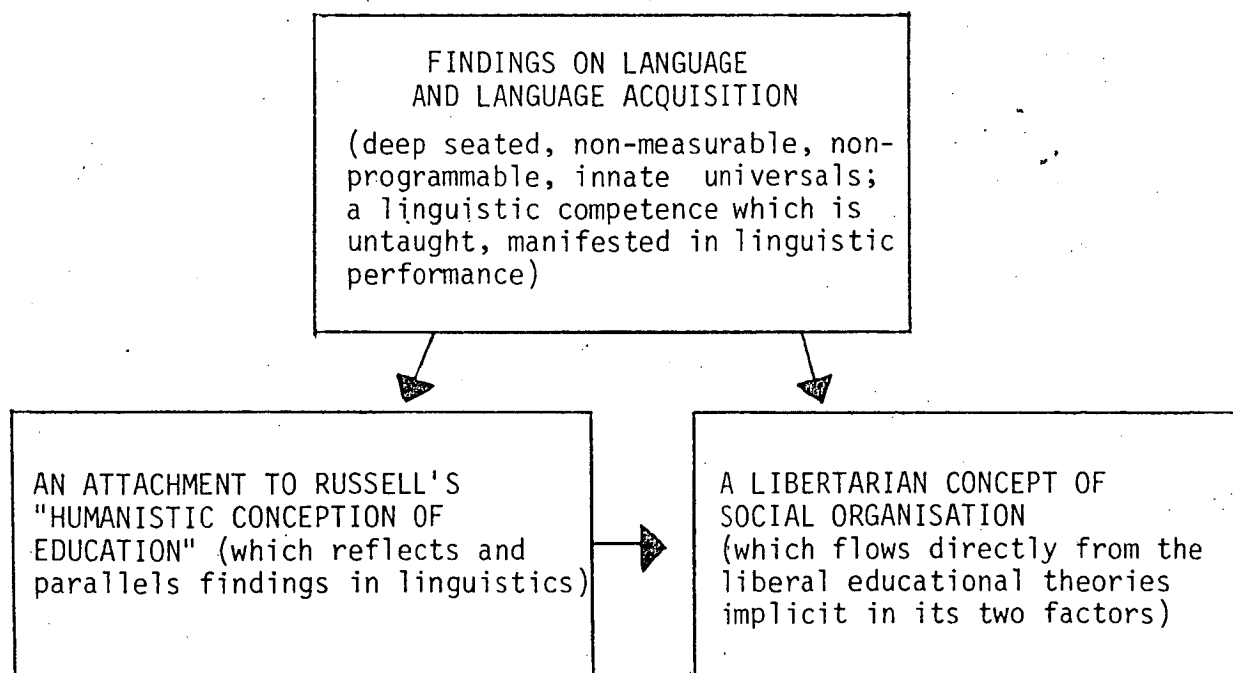


figure one

The direction of influences demonstrated by the arrows in figure one requires amplification and considerable justification as provided below.

In the Introduction to this study a strong point was made of the fact that, prior to 1968, Chomsky's published work was confined largely to topics drawn from his academic discipline. After that time there was a radical explosion of interest in matters non-academic. This fact alone suggests that Chomsky's academic interests chronologically were antecedent to his wider interests in education and his public polemical involvement and that by implication (post hoc ergo propter hoc) influenced those interests and involvement. This, on its own, is not enough to demonstrate the point that his views on education have their roots mainly in his earlier work in linguistics, since the Vietnam War itself for example could well have been a catalyst for these views. However, the weight of evidence suggests that the chief factor is indeed the chronologically earlier one, that his findings and studies in linguistics came first and influenced his educational views.

The point to be demonstrated is this: Chomsky intellectually generalised to education his findings on language acquisition which conclude that the learning of a native language is achieved by discovery using faculties native to the mind. There is no doubt that his stand on this matter relating to language acquisition is a consistent one, which betrays no shifts in attitude apart from a reinforcement based on confirmatory evidence.⁵¹ It follows then that generalised attitudes to education raised up on this intellectual basis have also become stronger and reached a point of virtual confirmation as well.

It would seem then that Chomsky's earlier work, his research and evidence, confirmed for him that language acquisition, at most, is a reflexive form of learning and even more probably that the individual learns quite passively and effortlessly the language manifested in his environment by medium of the "apparently deep-seated and rather abstract principles of a very general nature" that explain the manner of his language acquisition⁵². In his earlier writings Chomsky drew no explicit implications, from this strengthening assumption, for education nor any implications for a conception of social or political organisation. It is clear from a perusal of any of his earlier works and in particular the lengthy and detailed *Logical Structure of Linguistic Theory*⁵³ that he was at that time drawing no publicly debatable conclusions in his writings for education as it has been dealt with in the terms of this study.

It seems likely that Chomsky was developing views on education concurrently with his research into the manner of language acquisition but that these were not formally alluded to in any detail until the publication of *Language and Mind* in 1968, and even here only as directly related to the role of language in education.

For this discussion, the vital step which needs to be demonstrated is Chomsky's reapplication of his views on language and education to education in general. Why does he ally himself so strongly to the humanistic conception of education?⁵⁴ This conception, as propounded by Russell, claims that the primary goal of education is to elicit and fortify whatever creative impulse man may possess.⁵⁵ It sees this *creative impulse* as an abstract, about which little is known. To foster this impulse, education must be guided by a spirit of reverence and caution for something sacred, indefinable, unlimited, individual and precious. It has been manifestly demonstrated in this study that Chomsky's research in language has confirmed for him that the *linguistic competence* brought into the world by the child, while different, has much in common with Russell's creative impulse, that it parallels it in many ways and that in particular its abstractness defies analysis. It follows that when allying himself to a stance on education in general Chomsky would choose a position with features common to that area of education where his attitudes had been refined and rationally made patent. He had discovered to his own intellectual satisfaction certain educationally linked notions about language; direct instruction in language has no role; it is futile and impedes development⁵⁶; language development demands an untrammelled, creative intellect and thus by implication is liberating for the individual, giving him an instrument at his disposal for use as his critical spirit directs him;⁵⁷ techniques of conditioning and training in language will restrict development, obviating influences in the environment⁵⁸ which will allow innate *linguistic competence* to be manifested in *linguistic performance*.

An examination of Chomsky's interpretation of the humanistic conception of education⁵⁹ will reveal parallel assumptions to the above resident there; direct instruction in education is futile and even damaging⁶⁰; for education to be effective, motivation and free will must be resident in the learner since there is evidence that voluntary action plays a very significant role in learning⁶¹; education must be liberating for the individual; learning does not result extensively from conditioning

and to claim that it does may be a dangerous and pernicious dogma⁶², since these techniques may well restrict and misdirect the creative impulse, an abstraction about which we know too little for certainties to be formulated such as those implicit in conditioning techniques. Chomsky views the university and the school, in their ideally constituted form, as analogous to that environment wherein linguistic competence is manifested in linguistic performance⁶³; that education is best realised by creating an appropriate environment where learning can take place, according to the needs and learning modes of the individual student. A learning centre is required, but not necessarily a teaching centre.⁶⁴

There would seem then to be ample justification for the claim that Chomsky's work and findings in language influenced his strong commitment to the humanistic conception of education.

Figure One above has another important feature which suggests that, together, Chomsky's views on language and on education shaped his world view and committed him to a libertarian stance on matters of social organisation.

Chomsky reacts strongly against techniques in language education and general education which constrain, in his view, the wideranging use of the intellect and take no cognizance of the innate capacities of the wit. Social and political patterns of organisation, which restrain individual creativity and produce a non-human mechanicalness in citizens, whether in the streets of Saigon or the schools of America, similarly receive strong condemnation. There is a consistency here which goes beyond mere parallelism. Chomsky views limits placed on academic freedom and general political structures which are tacitly or blatantly ideological, as tantamount, in the wider community, to the narrow educational methods which he condemns in the educational institution. Throughout the works examined in this study Chomsky expresses a fear of an "ideological consensus" developing in society,⁶⁵ of "mono-ideology" influencing education⁶⁶ and laments the absence of "ideological diversity".⁶⁷ The task of a liberal education⁶⁸, above all, is to liberate creativity, a creativity which implies diversity. Chomsky demands diversity in the social and political spheres as well. Social organisation must be oriented, in direct consequence of the humanistic conception, towards freedom and challenge, not guidance, direction and control,⁶⁹ since society itself can place unreasonable limits on the development of the individual's creative impulse, about which we know so little.

Russell's programme of world improvement, to which Chomsky commits himself, demands for the individual as much control of his own destiny as possible in order to create a world society which strongly opposes all but the most minimal forms of state intervention in personal or social life. All of these views appear to the writer to grow from Chomsky's academic study and research. For the observer they appear to be more than an ideological commitment. Rather they seem to have been reached via a circuitous intellectual course which has its starting point in Chomsky's discoveries about language. This view is reinforced by his pejorative use of two terms in his work; *pragmatism* and *trivia*. A consideration of these will complete this discussion.

Trivia is an important word for Chomsky. Indeed he seems to have coined a common term derived from it, *non-trivial* which he very frequently uses in his discussions on transformational rules. Commonly he warns that in politics, education and linguistic research there is a tendency to become preoccupied with the immediate and measurable, because these trivial things seem to be controllable while things that are more long-term, deep-seated or abstract are harder to interpret and control, but are at the same time eminently more important.⁷⁰ *Pragmatism* relates here directly to *trivia*. He sees pragmatism manifested in actions which are directed towards short term aims, in the light of limited knowledge. These aims are intended to achieve what is perceived as an immediate good. However they frequently ignore and interfere with what may well be a long term good which is more abstract and less controllable, but which may be immeasurably more important. Pragmatism may take many forms. Three of these are political pragmatism, educational pragmatism in general, and pragmatism in linguistic research. All are characterised by short-sightedness. To Chomsky an over-reliance on pragmatic techniques is dangerous, whether in education where "small incremental achievements" and "behaviour modification" are the goal while the long term needs of the student or the society are endangered,⁷¹ or in foreign policy where a "resourceful diplomacy" in Vietnam⁷² for example may appeal to pragmatic politicians while disregarding the long term needs of the people involved. He condemns oppression and repression in any form, whether by the pro-war lobby in education in America, by native elites in Indo-China or by Israelis in Palestine, since the creative impulse of the individual must be treated with reverence and caution and policies which contradict this requirement, implicitly contradict for Chomsky his researched findings in linguistics and his humanistic conception of education.

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2	4.6.12, 4.6.24
3	3.2.1, 3.2.6
4	2.2.26
5	3.1.15
6	3.2.2, 4.5.7, 4.5.10, 4.5.13, 4.5.16, 4.5.26
7	2.1.4, 4.5.1
8	4.5.19, 4.5.20, 3.2.2, 2.1.7
9	4.5.26
10	2.1.1, 4.5.4
11	3.1.23
12	4.5.34, 4.5.35, 4.6.6, 4.1.59
13	2.1.7
14	4.5.1, 4.5.19, 4.5.20, 3.2.2, 2.1.7, 4.5.7
15	2.1.7
16	2.1.14, 4.6.33, 4.6.37
17	4.5.26, 2.1.7
18	3.2.11, 4.1.59
19	3.2.10
20	4.1.59, 3.3.1, 4.6.21
21	2.2.6, 4.1.42, 4.1.44, 2.2.1
22	2.2.6, 2.2.8, 2.2.9, 2.2.23, 3.2.12
23	3.3.1, 4.1.43
24	4.1.29
25	4.1.30
26	2.3.1, 4.1.46
27	4.1.34
28	4.1.42
29	2.2.10, 3.2.1
30	3.1.4, 3.1.17, 4.1.25, 4.3.1, 4.3.4
31	3.1.15, 3.1.22, 3.1.23, 3.1.64, 3.1.4, 4.1.2
32	2.1.3
33	2.2.22, 2.3.3, 2.1.14
34	3.2.5, 4.1.49, 4.6.33, 4.6.37
35	3.3.6, 3.3.7
36	2.2.26, 3.1.23, 3.2.9, 4.1.59
37	3.1.14, 3.1.66, 3.1.68, 2.1.1, 3.2.6

38 3.2.12, 4.1.23, 4.1.25, 4.1.43, 4.6.42, 4.6.49, 4.6.51
39 4.1.29, 4.1.59
40 3.2.5, 4.1.30, 4.6.12
41 2.2.1, 2.2.21, 2.2.22
42 3.1.23
43 4.6.17, 4.6.41
44 2.2.8, 2.2.6, 2.2.22, 4.1.25
45 2.2.15, 3.1.23, 3.3.4, 3.3.6, 2.2.19
46 3.2.3
47 2.1.1, 4.6.9, 4.6.26
48 2.2.1, 2.2.10, 4.6.49
49 3.2.1, 4.1.59, 4.6.9, 4.6.12, 4.6.24, 4.6.26, 4.6.41
50 4.6.51
51 4.1.59, 4.5.34, 4.5.35, 4.6.6
52 1.1
53 4.4 (Appendix)
54 4.6.17, 4.6.24
55 4.6.9
56 4.5.7, 4.5.13, 4.5.16, 4.6.6
57 4.1.59
58 3.2.2
59 4.6
60 4.6.37
61 4.6.33, 4.6.37
62 4.6.33
63 4.1.43
64 4.1.46
65 2.2.19
66 2.2.8
67 3.1.68
68 3.2.1
69 4.6.24
70 2.1.14, 2.2.6c, 2.2.22, 2.3.1a
71 2.3.1a, 4.6.37
72 2.2.8

2.2.4.

(a) During these years I have taken part in more conferences, debates, forums, teach-ins ...

(b) Chapter "Introduction" page 11.

(c) INCIDENTAL REFERENCE ONLY

2.2.5.

(a) ... a teacher in a Montagnard village

(b) Chapter " Introduction" page 13

(c) INCIDENTAL REFERENCE ONLY

2.2.7.

(a) What is needed, clearly, is better training for American officials

(b) Chapter, "Objectivity and Liberal Scholarship" page 37.

(c) INCIDENTAL REFERENCE ONLY

2.2.11.

(a) The record is instructive.

(b) Chapter "The Revolutionary Pacifism of A.J. Muste" page 159.

(c) INCIDENTAL REFERENCE ONLY

2.2.12 and 2.2.13.

(a) "If the South Vietnamese forces of Prime Minister Ky are so inadequate in numbers, intelligence and training.... then instead of Americans trying to train, indoctrinate and pacify an alien people, the time is long past for us to withdraw"

(b) Chapter "The Logic of Withdrawal" page 179.

(c) This is an abbreviated version of a shortened quote from a speech by Senator Young, used by Chomsky to illustrate the fact that the pragmatic political tide is beginning to run against the war.

2.2.16

(a)the supplying of arms and military
training

(b) Chapter "The Logic of Withdrawal" page 213.

(c) INCIDENTAL REFERENCE ONLY

2.2.17.

(a) "The agents were South Vietnamese
and were trained by the CIA in Special
Forces camps"

(b) Chapter "The Logic of Withdrawal" page 226 N.47

(c) This is from an article by Louis Heren in *The Times*
INCIDENTAL REFERENCE ONLY

2.2.18.

(a) "the war in South Vietnam has been
between the large, professionally trained
army of an unpopular government"

(b) Chapter "The Bitter Heritage: A Review" page 244

(c) This is a quotation from Michael Field's *The Prevailing Wind*
INCIDENTAL REFERENCE ONLY

2.2.20.

(a) and American "advisers" guide
and train the troops

(b) Chapter "Some Thoughts On Intellectuals and the Schools" page 248.

(c) INCIDENTAL REFERENCE ONLY

(a) "....Army's riot control school, an institution hurriedly conceived a few months ago to teach the grim lessons derived from the Detroit and Newark riots"

(b) Chapter "Supplement to 'On Resistance'" page 312.

(c) This is extracted from an article by Homer Bigart in the
New York Times

INCIDENTAL REFERENCE ONLY

3.1.1.

(a) "Many of these officers were trained in the United States"

(b) Chapter "Indochina and the American Crisis" page 10

(c) This is a comment on American aid to the Brazilian military training programme made in 1965 by the Chairman of the House Foreign Affairs Committee

INCIDENTAL REFERENCE ONLY

3.1.2. and 3.1.3.

(a) "When students at Saigon's teacher training college were asked to list 15 occupations in an English examination, almost every student included launderer, car washer, bar-girl, shoeshine boy, soldier, interpreter and journalist. Almost none of the students thought to write down doctor, engineer, industrial administrator, farm manager, or even their own chosen profession, teacher. The economy has become oriented towards services catering to the foreign soldiers"

(b) Chapter "Indochina and the American Crisis" page 58

(c) Chomsky compares the corruption, based on venality, in war-torn Indochina with "the real corruption", which amounts to a loss of national identity and the overturning of indigenous culture. This ditribalisation by urbanisation, in Saigon at least, has produced a population trapped in anomy and in a service class role only for the foreign troops. The quotation is extracted from Don Luce and John Sommer's *Vietnam: The Unheard Voices*.

- (d) There are no relevant, worthwhile inferences that can be made from these citations. In fairness it needs to be pointed out that the student's grasp of English vocabulary would of necessity be reinforced more by advertising bill-boards and enquiries from American troops relevant to the occupations listed, rather than to the more professional occupations in their English equivalent.

3.1.12.

(a) A young Lao teacher, openly sympathetic to the Pathet Lao, gave a similar though more vehement account.

(b) Chapter "Laos" page 151.

(c) INCIDENTAL REFERENCE ONLY

3.1.13.

(a) "These soldiers have no education. They don't know what they're fighting for".

(b) Chapter "Laos" page 170.

(c) A Laotian colonel describes to Chomsky the reasons for the Laotian peasant-soldier's lack of ideological commitment, whether to his own cause or the Pathet Lao's.

INCIDENTAL REFERENCE ONLY

3.1.63.

(a) "Movement is restricted to nighttime, school is taught at night ..."

(b) Chapter "Laos" page 194.

(c) Quoting a Pathet Lao representative in Vientiane, and other sources, Chomsky demonstrates the destruction American bombing has wrought in "liberated" areas, where surviving villagers inhabit only caves or the forests. In fear of constant bombing, they reverse their night and day lifestyles.

INCIDENTAL REFERENCE ONLY.

(a) A teacher whom we met in the refugee village ...

(b) Chapter "Laos" page 272 N.14.

(c) INCIDENTAL REFERENCE ONLY

4.1.1.

(a) the person primarily responsible for public awareness of the American war in Laos and its consequences is Fred Branfman, a Lao speaking American who spent four years in Laos in the International Voluntary Services (IVS), as an educational consultant for USAID....

(b) Chapter "The Wider War" page 175

(c) The undeclared war in Laos is discussed. American sources and evidence of indiscriminate bombing are listed, including Branfman's comments. (see 3.1.4c above)

(d) INCIDENTAL REFERENCE ONLY

4.1.2 to 4.1.20

(a) There were significant educational reforms an adult education programme Teachers were instructed to introduce what was called "a liberated style of education" that would "teach people to love their country." Teachers report that the level of instruction was raised A plan to extend education to seven years could not be implemented Mechanical teaching of reading was replaced by instruction with content

....
Some men and women were taken for training as teachers.... Opinions vary as to the efficacy of the training Lao and mountain tribesmen were brought to North Vietnam for technical and medical training....

"They taught us mainly agriculture." Women were to be treated equally and many were trained as nurses and soldiers....

Villages had a multitude of organisations: for administration, defense, youth, women, education

....

(b) Chapter "The Wider War" pages 184-185

(c) Chomsky cites evidence regarding the Pathet Lao and its social programmes, largely drawn from the reports of refugees. He paraphrases remarks made in an earlier work (see 3.1.23c above)

(d) See 3.1.23d above.

4.1.21

(a) Many cadres are being trained, among them some urban intellectuals.

(b) Chapter "The Wider War" page 191

(c) Discussing communist opposition in Cambodia to the Lon Nol Regime, in 1970, Chomsky quotes journalist Serge Thion from *Le Monde*, to prove that resistance is coming from native Cambodian elements. He refers to military training.

INCIDENTAL REFERENCE ONLY

4.1.22

(a)"....almost none of whom can lay claim to similar expert training...."

(b) Chapter "The Rules of Force in International Affairs" page 221

(c) The quality of the military training of western armed forces is discussed and compared with the low level of expert training received by national liberation irregulars

INCIDENTAL REFERENCE ONLY

4.1.24

(a) "....upward of 20,000 latino officers and enlisted men have trained at Ft. Gulick in the Canal Zone"

(b) Chapter "The Rule of Force in International Affairs" page 246

(c) Chomsky quotes Professor George Grayson, whose 1971 article in the *Washington Post* discusses the military training of counterinsurgency forces by America on behalf of Latin American regimes.

INCIDENTAL REFERENCE ONLY

4.1.27

(a) In 1965-1966, there was little interest in the war. Teach-ins drew small groups.

(b) Chapter "On the Limits of Civil Disobedience" page 291

(c) INCIDENTAL REFERENCE ONLY

4.1.28

(a) We can make some educated guesses.

(b) See 4.1.27b above

(c) INCIDENTAL REFERENCE ONLY

4.2. COUNTER-REVOLUTIONARY VIOLENCE: (1973)

Bloodbaths in Fact and Propaganda

- with Edward S. Herman
- Warner Modular

4.2.1 and 4.2.2

(a) Their armies and police, quasi-mercenary forces, trained, supplied, often paid, and directed by the United States ...

"... none of whom can lay claim to similar expert training ..."

(b) Chapter "Benign and Constructive Bloodbaths" page 9

(c) These are references to military training only.

INCIDENTAL REFERENCES ONLY

4.2.3

(a) ... the extermination toll included
"... half of Burundi's primary school
teachers..."

(b) Chapter "Benign and Constructive Bloodbaths" page 13

(c) INCIDENTAL REFERENCE ONLY

4.2.4 to 4.2.9.

(a) ... charges had been made that USAID
and the CIA were training Philippine
police... funding and training the
Philippine police ... Police are trained
in the United States at CIA, FBI, army
and local police training centers, and
in the Philippines at training academies ...

(b) Chapter "Repacification in the Philippines" page 15

(c) INCIDENTAL REFERENCES ONLY

4.2. 10 to 4.2.12

(a) Saigon has never demonstrated the
tolerance and faith in "reeducation"...
Mostly students, university teachers,
priests ... were initially on
"reeducation"...

(b) Chapter "Mythical Bloodbaths in Vietnam" page 29

(c) INCIDENTAL REFERENCE ONLY

4.2.13 and 4.2.14

(a) AID has provided police specialists
to train Saigon's police ... continuing
to provide basic and specialized
training for approximately 40,000
police annually

(b) Chapter "Accelerating Bloodbath in South Vietnam" pages 31-32

(c) INCIDENTAL REFERENCES ONLY

4.3.3.

(a) ... a teacher in East Jerusalem...

(b) Chapter "Nationalism and Conflict in Palestine" page 61

(c) INCIDENTAL REFERENCE ONLY

4.3.6

(a) Some leaders of the Vietnam opposition, with trained capacities for public speech, have not said a word on behalf of Israel"...

(b) Chapter "The Peace Movement and the Middle East" page 135

(c) In "Thinking the Unthinkable About Israel", an article in the *New York* magazine in 1973, Irving Horne makes some charges against activist elements of the peace movement which Chomsky rebuts.

INCIDENTAL REFERENCE ONLY

4.3.7

(a)... are we to conclude austere-ly that Howe has little taste for mere human needs (subsistence, education, welfare)?

(b) Chapter "The Peace Movement and the Middle East" page 149

(c) See 4.3.6c above. Chomsky's rebuttal continues.

INCIDENTAL REFERENCE ONLY

4.3.8

(a) "Once more the teachers and students were warned that they are exploiting freedom of speech in Israel too far ..."

(b) Chapter "The Peace Movement and the Middle East" page 153

(c) A newspaper report, cited in *Israleft*, 1973, is quoted here to demonstrate the low level of political expression tolerated by Israel in its occupied territories.

INCIDENTAL REFERENCE ONLY

4.4 THE LOGICAL STRUCTURE OF LINGUISTIC THEORY (1975) - Plenum Press

4.4.1 to 4.4.5

(a) In the fall of 1955, I began teaching at MIT in the Modern Languages Department ... I was most fortunate to have conditions for teaching and research that were virtually ideal. I was able to teach some undergraduate courses in linguistics, logic and philosophy of language.

I also had many opportunities to discuss this and related work with teachers and friends in Cambridge ...

... I met Morris Halle, then a student of Roman Jakobsons at Harvard and on the teaching staff at MIT.

(b) Chapter "Introduction" pages 2,5, and 30.

(c) This book was completed and duplicated in 1955. It was not formally published, however, until 1975. In his "Introduction" Chomsky provides some background to the compilation of the book and some autobiographical material.

INCIDENTAL REFERENCES ONLY

4.6.1 and 4.6.2

(a) "...the educational and social gaps"
...even in the unlikely event that social,
educational and economic gaps disappear...

(b) "The Mideast; Dark at the End of the Tunnel"

Ramparts 11 January 1973, page 54

(c) These references are used in an identical context elsewhere
(see 4.3.4 above)

4.6.3 and 4.6.4

(a) ...the U.S. will undoubtedly
continue to train pilots and other
personnel...
... mercenary forces, assembled,
trained, supplied and paid by the U.S.

(b) "Endgame : The Tactics of Peace in Vietnam"

Ramparts 11 April 1973, pages 26-27

(c) INCIDENTAL REFERENCES ONLY

4.6.5

(a) ...an associate of Diem who was
an instructor of anti-communism for
Saigon military officers...

(b) "Saigon's Corruption Crisis : The Search for an Honest
Quisling" (with Edward S. Herman) Ramparts 13, December 1974 page 27

(c) INCIDENTAL REFERENCE ONLY

(a) One might, without contradiction propose a theory of language that related surface structure to, say neural instructions, with no "intermediate level" of any systematic sort.

(b) "Questions of Form and Interpretation"

Linguistic Analysis 1(1) 1975 page 84

(c) A hypothetical theory of language, within the context of phonetic theory providing a universal mode for the representation of sound, is under discussion. Here a very simple but unchallengeable postulation is offered. Chomsky, for only the second time, uses "instruction" in this sense synonymous with stimuli (see 4.5.1c above)

INCIDENTAL REFERENCE ONLY

(a) Emigration of the educated and privileged may rise.

(b) "Breaking the Mideast Deadlock - The Prospects"

Ramparts 13, April 1975, page 59

(c) INCIDENTAL REFERENCE ONLY

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(Note: this bibliography includes all books and articles referred to, in the usual way. Many of these works contain no relevant references for this study. Some articles were reprinted in later books and this fact has been noted. In all these cases the article has been considered as a component of the book, within this study, rather than as an individual article. A separate bibliography for Part One of the study is at page 18)

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Essay and General Literature Index

Education Index

Readers Guide

International Index (Social Sciences and Humanities Index)

Social Sciences Index

Humanities Index

Social Sciences Citation Index (1975-1978)

CHOMSKY, AVRAM NOAM

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