their espousal of the phenomenological method; for example:

Finally, phenomenology must be seen as a countermovement, which originated as a protest against the naturalist view on reality, which is called scientism among human sciences. (67)

There is, however, a certain amount of inconsistency evident in this rejection, if their earlier identification of science with progress and technology typified in the policy scientific approach is to be accepted.

Central to each of these definitions of science is a particular theory of knowledge. In order to make any sense of them and to understand how science is perceived, it will be important to clarify what counts as knowledge for Pedagogics. That there is a close relationship between science and knowledge is clear; for example, man's insecurity about the future directs him to acquire knowledge associated with truth and certainty through practising science:

science is a means of exploring reality - a contribution to a particular body of knowledge with a view to discovering the truth about a particular phenomenon in the life-world (pre-scientific). (68)
This close connection between science and knowledge is also apparent in other activities; for example:

... science is a phenomenon of human life ... It is not essentially different from any other way of being involved in the life-world (69)

and

scientific practice is a way of living ... by which man is enabled to obtain a grasp of the world ... In this respect there is fundamentally no difference between science and other aspects of living such as gardening, drama, manufacturing, etc. (70)

Although Viljoen and Pienaar attempt to qualify this slightly by claiming that scientific practice may be distinguished from other ways of living through the scientist's intercourse with the world which is "directed consciously", rationally" and "cognitively", it is not clear how these mental states differ from those exhibited by "any normal, awake person who is thinking intelligibly".(71) That these mental attitudes may certainly be characteristic of the practice of science, is not in itself sufficient to demarcate them as unique scientific features.

But, these distinctions are crucial to an acceptance of Pedagogics as the only authentic way of studying education; for if it cannot distinguish between science and knowledge, and/or other areas of activity, then how can it be separated from ideology?
An examination of those criteria, such as 'truth' and 'validity', fundamental to any account of science, has shown a misunderstanding of elementary principles of logic and epistemology that has further serious implications for the ability of Pedagogics to distinguish between science and knowledge.\(^{(72)}\) Other attempts to make the distinction in terms of a notion of 'universality' manifested in the three modes of scientific practice have also failed.\(^{(73)}\) In the same way that it was untenable to maintain a distinction between science and pre-/post-scientific practice, mentioned earlier in Part IV, Section ii, and therefore, between science and values, Pedagogics fails to make parallel distinctions between science and knowledge and ideology, consequently putting in jeopardy its credibility as a whole.

Using Viljou and Biernaar's account of science, I have attempted to illustrate how the definition of science given by Pedagogics is inadequate, as is its theory of knowledge, which reveals flaws in the use of concepts such as 'truth', 'validity' and 'universality'. Consequently, it becomes impossible to distinguish between science and ideology and this is crucial for Pedagogics if it is to command any credibility as an autonomous science. After all, Pedagogics sets itself up as an alternative to ideology and "the rise of one educational doctrine or theory after another, each the product of
some closed world - and life-view or other and claiming to be scientific and valid." (74) Exactly how Pedagogics differs from these accounts is not at all clear.

Finally, some mention should be made of the findings of Pedagogics and the extent to which they are consistent with its interpretation of science. In this respect, I shall make some very brief and general remarks as the findings of Pedagogics have more specific relevance in the following section, which deals with the subsequent relationship between Pedagogics and C.N.E.

The findings of Pedagogics include a description of the features of the pedagogic situation, the pedagogic relationship, the aim of education and the pedagogic phenomenon which offers a detailed list of categories. As an attempt to answer the question, 'What is education?', they articulate some conditions but these are not really sufficient to distinguish education from other activities. In addition, they fail to present rigorous arguments and reasoning in support of their findings. (75) In addition, their work tends to be sprinkled with prescriptions, (as illustrated in the frequent use of the word 'must' and personal assertions, unargued and unjustified. (76) Gluckman has also criticized the findings of Pedagogics in terms of false and idealized generalizations offered, the apparent contra-
dictions and the obvious bias and lack of objectivity. (77)

Given the deficiencies of the framework within which these findings are located, it is not surprising that they fail to vindicate the claim of Pedagogics to be an autonomous science. Indeed, I hope its credibility in appealing to science as its authority has been unequivocally exposed.

Of course, I have relied solely on an analysis of Viljoen and Pienaar in arriving at this conclusion and other proponents may present different views, but there is sufficient evidence, (78) even taking into account these differences, to show that these arguments hold for Pedagogics as a whole.

c) What is subsequently revealed of the relationship that exists between C.N.E. and Pedagogics?

The foregoing discussion has attempted to establish that neither C.N.E. nor Pedagogics can sustain any credibility on the grounds to which they appeal. The ultimate justification of C.N.E. in terms of religion must be discredited, as must that of Pedagogics in terms of science. The exposure of their claims to different authorities as spurious dispels the most immediate and
obvious features of their diversity, namely their differences in terms of science and religion. What remains now, is to show how C.N.E. and Pedagogics are related to each other.

In a detailed study, Gluckman (79) demonstrates that not only was the choice of the phenomenological method by Pedagogics influenced by the Calvinist presuppositions, of its various proponents, but also that these presuppositions coloured their findings so that they are biased and lacking in objectivity. A close relationship between C.N.E. and Pedagogics is clearly indicated.

By comparing the educational research of those writers who claim to be working scientifically, i.e. within the framework of Pedagogics, with those writers who make no such claims, but whose writings clearly show their Calvinist inclinations, Gluckman discovers no significant differences between their findings. On the contrary, she finds consensus in the three particular areas which she investigates, with one qualification: that in the findings of those working "scientifically", explicit reference to religion is omitted.

Consequently, she notes the following resemblances between the proponents of Pedagogics and C.N.E.: both see the child in a negative light, needing intervention,
in contrast to the idealization of the adult, whose example illustrates the aim of education realized in an adulthood that is defined in terms of the norms of a specific community. Gluckman concludes that those working within Pedagogics have allowed their Calvinist presuppositions to dictate their choice of method and to intrude upon their findings. These are strong grounds for assuming a close relationship between Pedagogics and C.N.E.

Further insight into this relationship is given by Horner (80) who suggests that the problems inherent in Pedagogics as a result of its insistence on an untenable distinction between science and values, may be attributable to its attempts to contain within it the doctrines of C.N.E. As such, Pedagogics has compromised itself as a science and adopted a relativist standpoint in order to assimilate C.N.E. There is the suggestion that Pedagogics constitutes 'a philosophical red herring' to distract attention away from C.N.E.

Internally each has shown signs of the tension generated between the opposing demands of science and religion. For example, mention was made of the friction with reference to Articles 9.2 and 11 of C.N.E., in Part IV, Section i, where the importance of science was hinted at, but where its teaching was to be subordinated to the

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Word of God. Pedagogics reveals a similar tendency in its desire to provide a scientific framework within which a particular life-philosophy may be accommodated, and here it specifically suggests C.N.E. Both have tried to win credence for their positions in terms of the changing emphasis of authority, reflected in its movement from the Church to the domain of science.

It is against this background that the waning influence of C.N.E. (81) becomes intelligible and the increasing importance of Pedagogics (82) a logical progression. The more recent preference for Pedagogics reflects a broader trend away from the traditional authority of the Church and its Calvinist expression in C.N.E., towards a contemporary location of 'authority' in science. In this context, Pedagogics may be understood as a rationalization of C.N.E. ideology.

The changing pattern, however, in no way alters the ultimate nature of their quest, i.e. the search for a definitive authority; at once, revealing a conceptual misunderstanding of authority and affording insight into how C.N.E. and Pedagogics are ideologically linked.

The search for authority in terms of an external source, 'out-there' must always be a wild-goose chase because authority is mediated in terms of a conceptual scheme.
about which there is mutual agreement. It can never prescribe behaviour in advance, but it can provide a set of criteria on the basis of which we can make rational decisions about how to act. And it is this fundamental principle of human behaviour that both C.N.E. and Pedagogics deny, in confusing authority with power.

Their misguided search for authority provides the key to understanding the rationale underlying C.N.E. and Pedagogics. They share a common purpose, but represent different responses to the demands (real or perceived) of particular circumstances. Their aim is to secure a place for Afrikaner hegemony through education by appealing to an appropriate authority. Because of the way in which they misconstrue authority, there is no place in either C.N.E. or Pedagogics for uncertainty, open-ended change or any consequences of unanticipated ramifications.

Consistent with this position are attitudes of conformity, submission, docility and subservience to authority - all of which coincide with recent state initiatives to contain 'disruptive elements', introduce reforms that will streamline existing structures, and extend the sphere of its influence through new techniques of control and coercion.
While not wishing to suggest that there is some deliberate conspiracy in the form of a clearly articulated master-plan, I have tried to show that, as a result of their failure to distinguish between power and authority, C.N.E. and Pedagogics lend themselves to this sort of interpretation. Consequently, I think that their intentions and practices should be unmasked and exposed for what they are: indoctrination, not education.
CONCLUSION

In order to highlight what is unique about the operation of human society, as opposed to a 'natural whole', and man, as distinct from animal, I chose to analyse the concepts of power and authority. Each was taken to represent an entirely different way of articulating human behaviour, as characterized in the following two conceptions: one in terms of cause and effect and other in terms of reasons. Implicit in each is a particular notion of change.

My analysis began by noting the Roman origins of the concepts of power and authority in contrast to their absence in the language and political experience of the ancient Greeks. It was, ironically, under the influence of Christian dogma that the concepts of power and authority were combined with the Platonic myths so that their separate identities were blurred and they became firmly entrenched within the sphere of the Church (Part I, Section 1). A brief glance at some of the political philosophy between the sixteenth and nineteenth centuries showed how Calvin and Hobbes, for instance, struggled to re-locate the web of concepts surrounding 'power' and 'authority' and how later, Rousseau and Mill's treatment of them revealed a greater sensitivity for the need to distinguish between them
(Part I, Section ii). This impetus was to become submerged in the growth of the 'scientific attitude' so that the concepts of power and authority remained conflated, although their ties with the Church were loosened as they moved towards a new resting place in science and positivism (Part I, Section iii).

In Part II a more detailed analysis of 'authority' in contradistinction to power was undertaken, following Winch's account of what is entailed in the concept of authority. Briefly, it constitutes a way of regulating human behaviour according to rules and reasons about which there is mutual agreement. Implicit in this view of authority are notions of freedom, rationality, autonomy, agency and purposeful change; all of which run counter to the way in which a concept of power would regulate behaviour. On the basis of these conflicting characteristics, it was argued that it is necessary to distinguish between the concepts of power and authority.

Each concept embodies mutually exclusive and logically incompatible elements as expressed in the two opposing conceptions of human behaviour. If the distinction between power and authority is collapsed, these conceptions would be blurred and ultimately merged into an account of behaviour implied in the concept of power which spawns a causal explanation. And such an explana-
tion, it has been shown, can never be sufficient to account for a large proportion of human behaviour which is explicable in terms of reasons arising out of a social context.

A further consequence of the failure to distinguish between power and authority was illustrated in Part III through an inability to separate the diverse processes of schooling and education. The point was made that this would be crucial to evaluate what might be happening in schools with particular reference to the processes of education and indoctrination (Part III, Section i). The work of Wilson, Pateman and Barrow (Part III, Section ii) was used to demonstrate how a distinction might be drawn and to advance a particular notion of education. This account was further developed through its association with the concept of authority (Part III, Section iii) by focussing on the way in which each involved the sharing of conceptual schemes in social, rather than natural, terms; how this implied a broadly based conception of knowledge and understanding which presupposed that beliefs were held rationally and open to criticism and change; as well as incorporating notions of liberty, neutrality and autonomy so that the outcome of education can never be fixed or guaranteed.

On the basis of this account of education, two influen-
tial South African doctrines, namely C.N.E. and Pedagogics were examined (Part IV, Sections i and ii) and it was demonstrated that neither was able to distinguish between power and authority and ultimately, therefore, between schooling and education. By exposing their claims to separate authorities of religion and science, their credibility as educational doctrines was shown to be suspect (Part IV, Section iii). The misguided search of C.N.E. and Pedagogics for 'authority' as a source of power revealed a link in their underlying rationale so that it was concluded that their ultimate purpose was ideological, not educational, in securing uncritical acceptance for existing power arrangements and perpetuating the structures of apartheid, albeit 'reformed', at a new level of sophistication.

Underlying my position is a particular notion of change which is based on rational principles. While it is naive and unrealistic to suppose that one or two individuals might alter the course of history or that education may effect social change, the notion of change that I want to endorse is one that occurs as a result of individual agency and purpose, albeit of individuals working collectively. And education may have a role to play in the way in which it opens up opportunities for envisaging alternatives, exercising freedom of choice
and acting autonomously, but it should never be conceived of as a means-end dichotomy, as the consequences of education can never be predicted or prescribed in terms of specific criteria.

In South Africa, however, where C.N.E. and Pedagogics fail to distinguish between power and authority and ultimately, schooling and education, the opportunities for conceiving of change on a rational basis are limited. Given their predominant tendency to conceptualize behaviour in causal terms, change occurs as a result of the imposition of external factors and individuals are perceived as pawns in the process. Not only are the opportunities for meaningful and purposeful change restricted, but C.N.E. and Pedagogics with their emphasis on the concept of power and schooling, actually work against the possibility of realizing an open society and this has far-reaching implications in the context of South Africa, faced as it is at the present moment, by a watershed in its history.

Although the motivating force for my discussion has arisen from a concern about the role of change in South Africa, I think it could have a more general application in the way in which the concepts of power and authority highlight different ways of regulating human behaviour. While I recognize the important contributions that
analyses in terms of power relations have made towards understanding how society reproduces itself, (1) their significance must be limited to only one aspect of the rich diversity that characterizes human behaviour.

Throughout, I have argued the case for authority as this opens up possibilities for conceiving behaviour in terms of reason and rules about which there is mutual agreement and which ensures freedom of choice, autonomy, flexibility and the possibility of purposeful change. It is these features which are central to participation in a democracy, whether it be capitalist or socialist, and which my account of education seeks to uphold.
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