

EXAMINATIONS

A Commentary

J. C. MATHEWS

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Introduction

On an historical scale examinations are a recent phenomenon, at least in their application to the mass of people. Perhaps not quite so inescapable as death, they form, none the less, part of the experience of most people in the developed countries and increasingly in the developing countries. Seen in their early days as a means of liberation from the inequities of advancement through privilege, patronage and wealth, they now appear to some as a distorting influence on education and careers. It could well be that the next decade will be a critical period for examinations. In some countries there are signs of a decline in their use; indeed, there are instances of outright rejection; in others their use and influence increase. Precipitate rejection of them could be as unwise as slavish reliance on them. In any event, a period of appraisal seems to be called for and this book is designed to contribute to it. This is not to say that the book offers readymade solutions – those of us who have spent many years in the public examination system know only too well that very few of its problems have a single, right solution. So the book is analytical and discursive, rather than prescriptive; at the same time, it points to alternative courses of action and their likely consequences.

I have tried to avoid too solemn an approach; but this is not to deny the importance or seriousness of the subject. Banesh Hofmann (1964, p. 103) puts the point succinctly: 'Testing is no game. It is in deadly earnest ... lives can be warped and careers ruined.' However, those who are engaged in the day-to-day business of examining could not, while retaining their mental balance, dwell excessively on the consequences of their actions. This applies to all professions which touch the lives of people: medical, legal and teaching itself. Nevertheless, it behoves the profession of examining, as all other professions, to give an account of itself, and this is one reason why much of the book takes the form of posing and analysing apparently simple questions such as 'are examinations fair?'

One of the difficulties, however, is that when posing such questions to a profession the answers come back in the language peculiar to that profession. Examining is no exception to this; so I have been at some pains to avoid as far as possible the jargon which the professionals use, or at least the more pretentious parts of it. But it is not possible to convey the concepts of a highly technical activity entirely in everyday language, and where technical terms necessarily arise I have done my best to explain them simply.

I hope that I have avoided bias. There is a danger after a long period of engagement in a profession of polarizing either to the position of unquestioning acceptance of the establishment or to that of an iconoclast. The intention is to provoke a balanced discussion among a variety of

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people who have an interest: from those who are concerned with determining policy and practice through those responsible for the administration to those at the receiving end, teachers, students and parents.

Many experienced teachers have engaged in examining as committee members and agents of the public examining boards and to them something of what I have written will be already familiar. However, I hope that I have touched sufficiently diverse and novel aspects of examining to provide something of interest to them all. My main concern, after many years as a teacher and in teacher education, has been the lack of provision of courses and supporting material designed to educate teachers in one of the dominating influences on the curriculum of our schools and colleges. This applies to both pre-service and in-service courses. It may be thought that anything so mundane and, to some, distasteful as examinations should occupy an insignificant part of teacher education compared with those elements of it which are more academically respectable. Those who wish to make the study of examinations academically respectable should find little difficulty in doing so; they can involve themselves and their students in highly conceptual and demanding work in its technical, psychological, political and sociological aspects. That is not my main intention; I have tried to set all the many aspects of examining into perspective without obscuring the main issues by too much academic gloss. For those who wish to pursue any aspect in greater detail and depth, I have provided notes and references.

Examinations span all levels of education and nearly all countries, and most of the crucial issues are common to them all. I have drawn where necessary from my work in further and higher education and from examinations in schools abroad. But it has been necessary to confine most of the substance of the text to public examinations in secondary schools in England and Wales. Secondary school examinations now fall within the experience of all teachers at some time, and I feel that those who now teach in further and higher education will find something of use in this book for their own examinations and that it will give them a better understanding of the examining processes through which their applicants have passed. Likewise I hope that my friends and colleagues with whom I have worked in Scotland, also elsewhere in Europe, in Africa, Asia and Australia, will understand the reasons for the geographical restriction and still find interest in what I have written.

I owe so much to those with whom I have worked over the past twenty years that I hardly know where to start my 'thank you's'. Professor Frank Halliwell was primarily responsible for persuading me to undertake the design and operation of the Nuffield chemistry examinations. I have enjoyed a most amicable and fruitful co-operation with the officials of many examination boards at home and overseas, but I must make special reference to the two which have had the most formative influence:

London University and, more recently, the Joint Matriculation Board. All of them have contributed to my admiration for the high standards of technical competence and administration which the officers of examination boards maintain.

Then there are all the teachers who have assisted me as examiners, those whom I met when running courses in examining and many generations of my postgraduate students, who by their research and force of argument helped me to forge a coherent view of examinations. Of these, I make special mention of just one: Dr John Leece, who worked as my research officer for several years, wrote an excellent PhD thesis and after a short period at Newcastle and in the Philippines was tragically drowned on his way to take up a post in Australia.

Finally, I must record my gratitude to four people, each of whom read and criticized parts of the book in draft form: Professor S. Tomlinson and Mr G. M. Forrest, Mr C. Vickerman and Mr R. J. Whittaker. Their help was invaluable, thorough, perceptive and balanced, and I have made many changes for the better in the light of their comments. There are some issues on which our opinions differ, at least in emphasis; for the final version I take sole responsibility.

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Origins

The social aims of the system of civil service examinations were to restrict nepotism and to draw into the Imperial service able young men from the villages (Price, 1977, p. xiii).

Opinion on examinations ranges from total opposition through resigned acceptance to a touching faith in them as a pillar supporting the educational system if not society itself. There are few fields of human experience so beset by prejudice, and we would do well to slough off these prejudices and apply some radical questions to our various systems of examination. Before doing so, it is appropriate to devote a few pages to their origins and the ideals from which they are spawned if only to see what went wrong – if indeed anything has gone wrong.

It has become almost commonplace to trace aspects of Western culture to origins in ancient China; competitive entry to a civil service through public examination is but one of them. But the quotation which heads this chapter is apt; it is echoed in the words of many nineteenth-century educators and politicians and found expression in the examinations of the Indian Civil Service, the British military and civil services, the Prussian *Abitur* and French *Baccalauréat* and elsewhere. The parallels with ancient China are close enough. The young men in nineteenth-century Britain may have come from the house of the squire or the mill-owner rather than from the village itself, but the same aim held: to select young men for public or professional service by means other than family connection or a full purse (Halsey *et al.*, 1980). (In passing let it be noted that this new agency for selection was for men only, as were its predecessors; young women did not have access to it. Times have changed, of course, and women now have equal access, in theory at least, to examinations. To what extent this access to the means of selection leads to equality in a subsequent career is another matter.)

Roach's claim (1971) that 'examinations were one of the great inventions of nineteenth century Englishmen' could be countered by the Chinese precedent. But the point of invention or reinvention is academic; the nineteenth century saw the advent of examinations as we know them, and the twentieth has seen their extension to most levels of formal education. However, our reference to Chinese origins requires no

apology: there is something in Chinese culture, particularly in recent events, which sharpens and clarifies issues that in the West have tended to become complex and obscure.

Universities and Access to Political Power

Before the advent of the Indian Civil Service examinations, there came the reformation in degree examinations at the universities (Lawson and Silver, 1973) and an increased emphasis on rewards for academic merit – among which was advancement in political and public service. Both Roach (1971) and Montgomery (1965) convincingly identify an interesting link between the increase in academic competition at the universities and of academically qualified politicians during the nineteenth century;¹ and they point to the encouragement which these politicians gave to the use of examinations for access to many other walks of life since it was that vehicle which had carried them at least to the threshold of their own careers.

Access to political power has never rested solely on academic success, even in the nineteenth century, and has further declined since the days of 'that finely spun web that stretched from Balliol to the cabinet room' (Packenham, 1979). But there is still little evidence of widespread political support in Britain for the abolition of examinations as instruments of selection; although some politicians do venture discreet doubts about the need for an examination at the age of 16,² and examinations at 11 have greatly declined, largely through political action. This acceptance – indeed encouragement – of public examinations by those in political power may reflect the views of that considerable proportion of people who have gained career success initially by mounting an examination ladder. The higher level of achievement by the children of parents whose own careers have been established in this way is more likely to arise from parental pressure and encouragement than from the parental genes. Whichever it may be, the effect seems to have been the establishment of a strong reproductive drive in the examination system which in the main has defied attempts to reduce its potency.

The university examinations of the last century, intended as they were to produce a small elite in politics and public service, need not concern us at any great length. Our present-day problems lie less with the selection of the very few than with the sifting of the many. Nevertheless, there are some relevant points to be made on the relation between university examination systems and access to the professions in the nineteenth century.

The changes in the tests which led to degrees at our ancient universities are well documented and the details will not be recounted here. In particular, the work of Roach (1971) and Montgomery (1978) sets those changes in the perspective of educational, social and political changes of

the time. Nevertheless, there were several underlying features which have been subsequently reflected in examinations at lower levels: the academic substance of those examinations, the acceptance of the principle of competition and advancement by merit, the idea – novel at the time – that a common written test could be applied to many students at the same time, and arising from the common test the increase in the written medium of examinations at the expense of the oral and the practical.

It would be wrong to assert that the *substance* of university examinations changed little during the nineteenth century – there undoubtedly was change; but their essential nature remained. They were tests of intellect. More than that, they were tests set in the framework of knowledge as perceived at the time. The divisions into which the academic world directed their specialist studies: subjects, disciplines, field of study, modes of thought, call them what you will, remained substantially the same despite some mutation into various subspecies and hybrids. The status of each rose or fell with the passage of time and some, such as theology, fell quite a long way; but despite this, and despite fragmentation and regrouping and increases in number, the framework within which the pursuits of the mind were expected to operate remained relatively untouched.

The universities were primarily concerned with things of the mind and in distinguishing men one from another in terms of their ability to use their minds in one or more of the areas of study. They were concerned with the ability to reason and to discuss, to write and to talk. They were not directly concerned with a subsequent effectiveness in the world outside the academic one; indeed, they would have disclaimed any such intention – some still do. The ancient universities, at least, may have claimed a more direct link with matters of the soul and hence with the world to come. That claim was in decline even before Darwin and subsequently has dwindled to a vestige. It is of interest to note, however, that the print of this once-dominant aspect of the ancient universities remains to be seen in the curricula and even the examinations in schools.

Technical and Professional Examinations

It should not be thought that the universities were the only bodies to be developing their curricula and examinations. Particularly in the first half of the nineteenth century the governing bodies of the professions, the Royal Institute of Civil Engineers, the General Medical Council, the Royal Institute of Chemistry, to name but a few, set up systems of examinations by which they controlled entry to the professions and the levels of competence required in order to do so. Dore (1976) makes the point that in those early years 'The standards of competence required by various professions gradually became more precisely defined – at first by the practitioners who established their own means of testing and certifying

skills.' Significantly he goes on to say: 'But gradually public authorities took an ever increasing hand' (*ibid.*, p. 15).

At about the same time, mainly through the Royal Society of Arts and later the City and Guilds of London Institute, vocational examinations came into being for those training for trades and crafts. Designed for the increasing number of skilled men demanded by expanding industry and commerce, they were linked on the one hand to the apprenticeship system with origins going back at least to the Middle Ages and to the more recently founded mechanics institutes of the nineteenth century. The shift from apprenticeships at the place of work to institutionalized training, although not total, was significant; it corresponds to the gradual trend to remove training and certification from the professional bodies to the universities and other institutions of higher education. Apprenticeship and learning on the job did not disappear, of course; but the division between theory and practice became more apparent: practice was what was done at work, theory was what went on in schools and other educational institutions.

The move of some of the training from the place of work to the mechanics institutes and their like was quickly followed by a similar move in the system of qualification. At first examinations and certification were conducted by each institution separately,³ but there soon followed a trend towards more general systems to give a wider currency to the certification; the Union of Lancashire and Cheshire Institutes (1839) is an example. Later the Science and Art Department (1853), the Royal Society of Arts (1854) and, later still, the City and Guilds of London Institute (1878) started examinations in technical education, although with different objectives and emphases, and continued the trend towards a more general national system. It is worthy of note that the function of the examinations was not simply to issue certificates and prizes and to select young people for advancement in trade and industry; a primary function was to 'encourage systematic study and punctuality of attendance among the students at Mechanics Institutes' (Montgomery, 1965, p. 77) and, equally significant, certain of the higher professional classes were 'barred from sitting'.

The Science and Art Department used its examinations linked to prizes, awards and capitation grants to stimulate scientific and technical education in the mechanics institutes mainly for evening work, and in schools for daytime work. The dual function of selection of the most able, and the enforced encouragement of a scientific and technical trend in the curriculum, was as deliberate in this field of education as it was in general education at both secondary and elementary levels. Although the direct financial instrument of payment by results was virtually to disappear by the end of the century, this dual function of examinations remained, based on the assumption that they could fulfil equally well both the evaluation of students and the evaluation of educational institutions.

It is significant that in technical education in Britain the control of examinations was not unified; it lay within a complex of organization, professional, educational, commercial, industrial and political. Although central government through the Science and Art Department and the Board of Education exercised some influence and control, this control was indirect. This tradition has continued and, as we shall see in the next section, shows similarity with the parallel development of examinations for a more general education in schools.

It would be false to set up a dichotomy of academic university examinations on the one hand, and practical professional and craft examinations on the other. Of course, the academic tests of the universities were not without significance in selecting the most able for the various professions, and equally the professional and craft examinations had a strong academic element. A clear line between mental ability and practical effectiveness is not one which can be drawn exactly, if at all. Nevertheless, a distinction between the academic and the directly professional can be perceived; this division is still with us and remains a cause for concern. The Royal Society of Arts is certainly aware of the problem, devoting all three of its Cantor Lectures in 1979 to the theme 'Education for capability', and the shortcomings of academic examinations was a recurring variation on the theme. In the third lecture Burgess (1979, p. 157) says, 'In testing the efficacy of the education provided we shall need to test what it is a student can do, rather than what he knows'.

Tests of Merit

The effects of competitive examinations on access to positions of political and professional authority were, on an historical scale, rapid. By the end of the century patronage, although still present in less overt forms, had declined greatly and it seems likely that most people with real power in politics, the civil service and the professions had, at some time, submitted themselves to this new form of selection and owed their positions, at least in part, to success in examinations. There were significant exceptions: the members of the growing Labour and trade union movements, although they subsequently acquired an intellectual Bloomsbury coterie and their own institution of higher education at Nuffield College, Oxford, achieved positions of power by competition more directly related to their function in society. And it is doubtful whether those in authority in business and industry owed much to examinations despite the extraordinary growth of the public schools and the numbers of the sons of the middle classes who attended them.

Whether this new move towards a meritocratic system of selection to positions of authority was for the better is a matter of judgement. Undoubtedly it was received with great enthusiasm. The competitive spirit in institutions of education was widely acclaimed, although as we

shall observe later there were some dissenters who foresaw disadvantages, other than the loss of patronage, in using learning and scholarship as an avenue to positions of power, status and wealth.

The early claims made for examinations were profuse but rested on frail evidence. Roach (1971) records an interesting correspondence between Queen Victoria and Gladstone during discussions about the use of competitive examinations for gaining access to civil service posts. The Queen wrote, 'a check ... would be necessary upon the admission of candidates to compete for employment, securing that they should be otherwise eligible, besides the display of knowledge which they may exhibit under examination'. (An early plea for positive discrimination!) To which Gladstone replied: 'Experience at the universities and public schools of this country has shown that in a large majority of cases the test of open examination is also an effectual test of character' (*ibid.*, p. 31). Over a century later we are still making more or less the same assumptions, although with perhaps less Gladstonian certainty on the rights of the matter.

The Locals

Gladstone's assertion not only stood for universities, but also for schools. This, then, is an appropriate point to shift the emphasis to school examinations. Important and influential as they were, examinations in the universities and professional bodies touched but few of the educated populace. Seen in the long term, it is probably on young people under the age of 18 in schools and colleges that they have had the greatest effect. In the United Kingdom, at least, this application of examinations to the young is increasing rather than decreasing,⁴ and some discussion of their introduction into schools and their subsequent development can illuminate the present state of affairs.

The inception of the Local Examinations of Oxford and Cambridge universities in the middle of the nineteenth century is well documented (Brereton, 1944; Montgomery, 1965, 1978; Roach, 1971) and only those points which touch on subsequent events and policies will be discussed here. The first point is that these two examinations, first conducted in 1858; marked the beginning of the application of examinations to schools by an external body. There were other, earlier examining bodies concerned with secondary education, the College of Preceptors, for example, but it is from the Oxford and Cambridge Locals that our present system of external examinations for schools can be most directly traced. This does not discredit the initiative of Durham University which started its own 'local' examination in the same year, nor the London University Matriculation which preceded the Oxford and Cambridge Locals. The latter, however, was different in function from the Local examinations and London University did not enter the field until it instituted its Junior

and Higher School Certificates early in the twentieth century along with similar examining authorities such as the Joint Matriculation Board of the Northern Universities. From this follows a second point: the external bodies which had the most formative influence on school examinations were essentially *academic*, unlike the College of Preceptors and the Royal Society of Arts, both of which had a vocational base. The reasons for this will be discussed shortly; the point to be made here is that the dichotomy between academic and vocational or functional tests arose early and it was the former which predominated in schools.⁵ The reasons for this are clear and not necessarily to be disparaged. They are to be sought in the motives which lay behind the involvement of Oxford and Cambridge universities in school affairs, motives which today are still discernible, some would say dominant, in the influence of universities in public examinations as applied to schools. Foremost among these, and in keeping with the spirit of the times, was the desire to improve the quality of education provided in the middle-class schools,⁶ without direct intervention of an outside body, particularly the state. Here we have an early example of the deliberate use of examinations applied by an external body to individual pupils with the express intention of influencing the curriculum provision in schools. There was more to the motives than that, of course: there was also the wish to extend admission to university beyond the students in the small number of the 'great' public schools, thus adding to the other forces already in motion which were tending to break down the boundaries between the aristocratic and middle classes in society at large.

The wish of the universities to display a more popular image appears to have been genuine. It sprang from a desire to appear more egalitarian (by the standards of the time) on the one hand, and on the other to demonstrate to a wider section of the people the worthwhileness of academic studies as purveyed by the universities rather than more directly vocational studies or 'useful knowledge' as they were sometimes called. There can be no doubt of the influence of the universities on public examinations both in schools and for the various services of state. The success of the reforms within the universities themselves convinced several of their influential members that the same reforms could be equally beneficial elsewhere and a system of examinations for schools was one of them.

It will not be altogether surprising to those who know the two universities in question to learn that the discussions which preceded the introduction of the Locals were not so much concerned with the desirability of intervention in the affairs of schools, nor of the substance of the examinations themselves, as with the title of the award and the place of religious knowledge in the requirements (Roach, 1971). Indeed, so sure were the originators of their role that direct inspection of the schools was canvassed both as complementary to the examinations and as an alternative to them.⁷

It was also a characteristic of the times that the establishment of a system which was to have a profound and prolonged effect on schools nationally – and soon internationally – came to pass through the initiative and drive of a very small number of people, and not through government. This was typical of the Victorian cult of the individual entrepreneur in commerce and industry, and it had its reflections in education. In connection with the Locals the name of Frederick Temple was probably the most prominent. Those were times when such matters were executed with a sureness and boldness which is breathtaking to those who, in recent years, have been concerned with discussions on changes to school examinations.⁸ Of course, it would be incorrect to suppose that the introduction of the Locals was entirely innovatory or the work of one man. Much experience of examining was already to hand in the work of the College of Preceptors and the Society of Arts and, more directly, in the work of the Exeter Committee.⁹

After an uncertain start, the external examining of pupils in middle-class (secondary) schools was well under way by the end of the century in the United Kingdom and subsequent events have increased it to such an extent that it appears to carry all opposition by its own momentum, to the dismay of those who wish to stop or at least reform it. But we do well to summarize and reconsider the motives of those who started it. They were threefold: to improve academic standards, to provide an objective system of selection and to 'bring forward able boys and girls from a lower social level' (Roach, 1971, p. 9); these are themes which will recur in this book. So quite openly the examinations were intended to be used to change the curriculum in schools, and to change society, as well as to provide certificates; a commitment to social and curriculum engineering which would be unthinkable in some countries today.

The Elementary Schools

Examinations in elementary schools embodied essential differences from those of the middle-class or secondary schools. For one thing, they were established directly by government, not delegated, and they were conducted by visiting inspectors appointed by the state rather than by the remote control of the Locals through the universities. The substance of the examinations (reading, writing and arithmetic) was much more restricted and the level of attainment was lower. But the elementary school examinations of the Revised Code of 1862 did have some things in common with the Locals and with technical and vocational examinations. They were intended to improve the standards of teaching, by bringing pressure to bear on both teachers and managers, and to improve the level of attendance and thus provide educational advancement for those who otherwise would have left with little or no schooling. It is difficult to find a good word for the Revised Code. The financial pressure which was its

main source of motivation appears to have been much less acceptable than the more subtle academic pressure of the universities through the Locals. Yet the same principle applied to technical education has attracted much less attention (Montgomery, 1965).

Clearly there were limits to which the laws of the market could be applied to education, even in the nineteenth century, and a return now to anything like the Revised Code would be out of the question. But did no one, or no school, benefit from the application of those tests? Would not some children have remained illiterate, never to read a book, if the Revised Code had not come into force? Obviously there must be better means than tests and financial sanctions and rewards by which teachers and schools can be held to account and pupils encouraged to learn; but in the light of the present 'back to basics' movement we may be concerned more about the means of the Revised Code than its ends.

Darwinism

There were common driving-forces in the nineteenth century behind the growth of examinations at all levels. Perhaps the most significant was the great surge of competitive energy which marked much of that extraordinary century, which can be marked in so many areas of human activity – the political, commercial and imperial, even in competitive games. Reference to games is not as trivial as it may appear. The idea of selection through competition, with all its Darwin-like implications, permeated society or at least that part of society which had raised itself above the level of destitution. As Roach (1971, p. 16) says: 'The idea of competition was in accord with the spirit of the age.' The widely held opinion that competition, in whatever form, refined the character for the better provided the advocates of examinations with a strong argument.

While academic criteria through competitive examinations undoubtedly held pride of place for advancement of individuals from mid-century onwards, other criteria also applied. Honey (1977, p. 111) quotes the principal of Brasenose College, Oxford, as saying, 'anyone who had been in the Eton Eight or in the cricket eleven of any Public School was accepted as an undergraduate without any fuss as to a matriculation exam'. The eruption of athleticism in the mid-nineteenth century is discussed by Mangan (1981), who relates the extraordinary changes which took place in the leisuretime activities in the public schools, both old and new, within a short space of years. From rural pursuits which ranged from country rambles to the killing of nearly any creature which moved (including robins!) (ibid., pp. 18, 20), these schools moved deliberately to organized games – much to the relief, one imagines, of the local wildlife. It is worth mentioning in passing that many of the competitive games, which now occupy so much of the leisure pursuits of people throughout the world arose, or gained impetus, from the Victorian

public schools. Not only were these games regularized into more or less their present form, they provided an alternative vehicle for competition and advancement to that of scholarship. The latter having already been made respectable by Dr Arnold, competition through games followed on closely. The parallels are close: not only were games included in the curriculum, they became compulsory and provided a non-academic system of selection for the 'glittering prizes' of university and career (Baldwin, 1983). There was, of course, a strong emphasis on playing the game rather than on the result (the process rather than the product curriculum!); but one suspects that the result was not as unimportant as contemporary writers would have us believe.

The dominance of the written, academic mode of competition has persisted until the present time. There are other forms of competition, of course, and these will be considered in turn; but, while on the subject of competitive physical activities, the search for status for physical education, at secondary and higher levels, through entry into the examination system should be noted (Madeley, 1979). In its heyday physical activity, certainly in the form of competitive games, needed no such prop to maintain its high status in the curriculum; now, it seems, some physical educators feel the need for academic respectability.

Mangan (1981) makes another important point when he remarks that the conditions of the mid-nineteenth century were not simply those of individual competition, but of the growth of collective responsibility. Just as the activities and natural competitiveness of professional people became regulated in the professional institutions which were established throughout the century, so did academic competition become regulated in examination institutions. So, finally, did physical pursuits and competition move from the anarchy of fisticuffs, bullying and poaching to established organizations which controlled and regulated the competition and awarded the prizes. This formalization of competition among the young, be it academic or physical, is important; because, once established and regulated, it becomes more than a little difficult to disestablish or reform it. The institutions necessary for its control show a powerful resistance to change.

Personal Qualities

Coupled with formalized tests of academic merit and tests of ability in games was another domain of testing, less formalized, but nevertheless overt, in the public and grammar schools of the period. It is difficult to put a name to it. The term 'affective', much in vogue, almost covers it, in the sense that it was concerned with attributes of personality and character such as enthusiasm, dedication, persistence and the development of a set of values. But in the nineteenth century it was rather more; those attributes which then attracted approval, and which now may not,