Universities and social progress in modernising societies: how educational expansion has replaced socialism as an instrument of political reform

The social role of formal education

To understand the forces leading to university expansion we must first consider the function of formal education in modernising societies. Modernisation is the process by which a society grows in complexity; greater complexity enables increasing efficiency and capability.\(^1\) Growth in social complexity can be seen in phenomena such as ‘the division of labour’ with its ever-greater specialisation of the functions performed by individuals, and the increasing differentiation of society into functionally specialised systems such as politics, the economy, the legal system, the armed forces, health service, the mass media, and education. These social systems are themselves becoming increasingly more complex, subdivided and sub-specialised.\(^2\)

Modern societies are no longer essentially hierarchical, but have come to resemble a ‘mosaic’ of functions, each with different rules of internal information processing.\(^3\) For example, the internal evaluation procedures of science differ from those of politics, and both differ from the mass media. These systems interact and shape one another’s growth (for instance when politics provides greater or lesser funding for science, or for science of particular types), but the basis of modernisation is that of separation and specialisation of functions.

The ability of humans to function effectively in this kind of highly complex modernising society is not a spontaneous attribute. Contemporary life is radically different from the kind of small, nomadic hunter-gatherer societies in which (it is generally presumed) humans evolved. In such societies the spontaneous mode of cognition is not functionally differentiated, and cognition is bound up with specific concrete circumstances.\(^4\)
But modernising societies require of their citizenry abstract modes of thought and the ability to participate in formal and specialised practices at work and in most other areas of social life. The economic necessity for prolonged formal education in complex modernising societies is well known (indeed this is often exaggerated, as demonstrated by Wolf). Training in abstract, systematic reasoning is therefore one primary goal of modern education; for example, the so-called ‘basic’ (but actually cognitively complex) skills of mathematics, reading and writing.

But the benefits of education, especially higher education, go far beyond the economic. Indeed, our whole societal conception of culture and morality entails that individuals be capable of ‘rational cognition’. Rational thinking is not a spontaneous attribute but is a consequence of socialisation, especially formal education; and without a trained capacity for rationality individuals are more open to the short-termist, but emotionally compelling, motivations and evaluations of the ‘Darwinian mind’ which evolved to optimise reproduction in an ancestral nomadic tribal environment. Graduates are not ‘better people’ than the uneducated, but they are statistically more peaceful, less racist, happier and healthier – as well as more prosperous.

When only a small, highly selective elite attended universities, such ‘liberal’ benefits of education were assumed to be ‘cultural’ (i.e. occurring by the ‘osmotic’ absorption of ‘high culture’ from intense personal interactions in the university social milieu). But now that such ‘relative’ moral benefits continue to be observed in mass higher education systems containing around half of the age cohort and funded at much lower per capita levels, it seems that the ethical and social benefits of university education are more plausibly a cognitive consequence of the broad social trend to increase the amount of abstract, systematic formal education.

It seems likely that the ‘general’ property of formal education, its ability to socialise individuals for the contemporary world, is mainly a consequence of the training to think abstractly and systematically. For individuals to pursue effectively their long-term interests, to integrate their numerous goals, and to participate in the artificial environment of the modern world therefore increasingly requires education. Once abstract, systematic cognition becomes habitual, it may be applied very generally to human activities – rather as mathematical algebra is applicable to many phenomena.

The implication is that a general abstract education has the property of preparing graduates for more rapid vocational specialisation. Such an education is highly variable both between and within societies – but includes instruction in a variety of different systems of abstract knowledge.
such as mathematics, music theory, the sciences, history, geography, linguistic structures. The (implicit) function of this kind of relatively unconstrained multidisciplinarity, is that each individual learns many systems, becomes experienced in rapidly learning new systems, and adept at switching between systems. Abstract, systematic and multidisciplinary education means that specialisation can be delayed, and this leads to a workforce who can readily retrain for several jobs over the course of a lifetime. The same aptitude allows individuals to cope with the multiple social systems, rapid change and social mobility typical of contemporary life.

The imperative of educational expansion

In modernising societies there is a long-term trend to extend the duration of ‘general’ education and to shorten the period of specialised vocational education. This is more efficient and flexible than the traditional prolonged apprenticeship, which prepared the individual for a single lifelong ‘vocational’ role. The narrowly vocational period of training, which prepares individuals for a specific job, has become progressively shorter and more focused (as befits a society in which most jobs and other social functions are becoming ever more narrowly specialised). For example, in the UK a doctor is typically trained over a period of about thirteen years from entering college, starting with five years at medical school, followed by the house officer year, then a prolonged specialist postgraduate education. But in the USA, which has advanced further along the path of modernisation, students spend four years in general education at college before attending medical school for just four years, followed by one year as ‘intern’. However, the extra time at college is compensated for by the fact that ‘postgraduate’ medical training is concentrated into three years of highly focused work, so that in the US it only takes a total of twelve years from entering college to train a medical specialist.

In this sense of allowing later specialisation and greater flexibility in moving between jobs, modern education is more ‘efficient’ than traditional education. This benefit must be set against the undeniable decline in educational efficiency and age-specific education attainment which is a consequence of moving from a selective ‘elite’ system to a (de facto) open-access mass higher education system. Modernisation implies continually raising the average level of generic cognitive skills in the population, typically by the method of expanding the average length of formal education. The UK has, we suggest, seen a considerable increase in the average level of cognitive skills over the past decade, as higher education
has expanded to include ever more of the population. This has been
disguised by the more obvious inflation of qualifications, with a decline
in average age-specific educational standards – for example both A levels
and undergraduate degrees clearly have a substantially lower minimum
standard than twenty-five years ago.\textsuperscript{14} Indeed, it is possible that educational
expansion actually entails a reduction in age-specific educational standards,
and these may be exacerbated by central government micro-management,
and the anti-competitive tendency of funding derived mainly from the state
bureaucracy.\textsuperscript{15} The increase in length of education must then be great
enough to compensate for these new inefficiencies.

However, so many more people achieve these (albeit easier) levels of
educational certification that, in sum, we believe there must have been a
massive increase in average educational attainment in society as a whole.
Over the past twenty-five years the massive expansion of university
numbers implies that about the same proportion of the English population
who used to leave school at 16 with a set of ‘O level’ standard qualifications,
now leave colleges and universities at 21 with a degree.\textsuperscript{16} Even allowing for
the decline in the minimum, average and maximum standards of school
and college educational qualifications; it seems very probable that an extra
five years of formal education (two at school, three in higher education) for
approximately an extra 30 per cent of the population (a threefold increase
from approximately 15 to 45 per cent of the age cohort graduating with a
degree\textsuperscript{17}) will have yielded very substantial cognitive benefits. To this can
be added the continually increasing proportion of the population with
doctoral qualifications, and who work in professions such as accountancy,
medicine and law.

Formal education is necessary for individuals to thrive in modernising
societies, and is also necessary for societies to thrive. Education has
therefore spread to encompass pretty much the whole population. The
recent expansion of university education should be seen in this context of
the long-term historical trend for ever more formal education for ever more
people; a trend which is so general and sustained as to constitute an
imperative.

A positive-sum view of education
While much public debate concerning formal education concentrates on
its ‘zero-sum’ competitive aspects (e.g. economic class differentials in
admissions, or which institutions are top and bottom of the league tables),
it is important to recognise that the social function of education in a
modernising society is essentially driven by a ‘positive-sum’ game.\textsuperscript{18} In a
zero-sum game one person can only benefit at the expense of another losing-out – for example in a status competition there must be losers as well as winners. In a traditional, zero-growth society (such as medieval Europe or any other agrarian economy) politics and social policy is mainly a matter of swapping winners and losers – the average benefit stays the same. The traditional view of education tends to be a zero-sum game of winners and losers, in which people are sorted into jobs and other functions of varying prestige. Educational reform merely changes the identity of the winners and losers. For example, in the early fifties Eastern bloc countries, descendants of upper-middle-class and aristocratic families were not allowed to go to university, while those of proletarian origin were favoured.

But in a positive-sum game (e.g. in a modern society based on growth in complexity\(^{19}\)) individuals can benefit from change without others necessarily losing – in principle ‘everyone’ may benefit. For example, in medicine the health benefits of good hygiene may apply to the whole population, so that everyone’s life expectancy increases – even the poorest. Increments of medical and public health interventions add increments of health in a positive-sum fashion. However, even while the whole population is benefiting, health inequalities remain relatively unchanged in magnitude, since both rich and poor benefit to a similar extent.\(^{20}\)

Something analogous seems to be happening with the expansion of higher education. At the same time as ever more of the population are being educated to ever higher levels, the differential income of graduates compared with non-graduates is persisting;\(^{21}\) and probably the same applies to both absolute and differential levels of both happiness and other measures of ‘lifetime welfare’.\(^{22}\) This is consistent with the interpretation that increments of educational experience add increments of cognitive capability in a positive-sum fashion. The modernising view therefore sees formal education as most importantly a positive-sum game, based on enhancement of the cognitive aptitudes of many individuals. More education for more people implies a higher sum of cognitive aptitude in society. It also implies a greater proportion of the population becoming more capable of culturally inculcated ‘rational’ modes of thinking. This is an outcome which potentially enables society to function more efficiently, less violently and less coercively; and to be more capable and productive.\(^{23}\)

Positive-sum benefits are gained even when access to, and provision of, education are unequally distributed. Indeed, if there is a requirement to maintain equality of access and provision during educational expansion, this will naturally act as a constraint to make expansion slower and more difficult, not least because continual redistribution requires stultifying and inefficient central political control – as can be seen in the UK higher
educational system. And the larger and more diverse the educational system, the more negative a constraint ‘equality every step of the way’ becomes. This kind of conflict between the rival imperatives of modernisation and equality is intractable – since modernisation is positive-sum while equality is zero-sum. Despite the problems of a social policy based upon zero-sum analyses, egalitarianism is, nonetheless, likely to be a perennial factor operating in human social organisation, including education; since the aspiration for equality of outcome is probably based on fundamental, evolved human dispositions. And in specific instances, policies to create greater equality will continue to be necessary or desirable. For instance, affirmative action for limited periods, to favour historically disadvantaged groups, may have broadly beneficial effects in some circumstances – but pursued excessively it is socially damaging.

From a modernising perspective the message is clear: general egalitarian ideals are neither achievable nor a desirable social objective. The demand for equality of outcome in education should therefore be considered as a psychological constraint to be worked around using whatever concessions and compromises are expedient.

Higher education and the decline of socialism

It is probably because modernising societies have transformed into positive-sum forms of organisation that the continual expansion of higher education has replaced socialism as the main ideological basis for reformist political policy. Mass higher education fosters a spirit of individual self-improvement and encourages social mobility, both of which operate against traditional ‘socialist’ ideals based on group solidarity. Socialism requires a world where individual fates are closely tied to group-entities, and where the weakest individuals gain strength from association. Traditional socialists have therefore been more concerned about equalising access to education and redistributing educational resources between classes, than they have been with expanding the total amount of educational provision. For traditional socialists, educational expansion should occur only when it satisfies the overriding need for equality of access, provision and outcomes. To put it in an ideologically extreme form: either everyone gets it, or no one gets it.

Social mobility has become perhaps the major cause of social progress in modernising societies, replacing redistributive policies. Social mobility has two forms: vertical and horizontal. Vertical mobility refers to movement up and down the social scale, while horizontal mobility refers to movement of individuals between organisations, jobs and geographical regions. Both
types of mobility are encouraged by the expansion of formal education, both have increased in modernising societies, and both tend to break up stable group entities. For example, increased upward and occupational mobility have together largely destroyed the power of those trade unions based on large-scale, long-term, localised heavy industry. The continuing social trend is towards upward vertical mobility, with progressively rising average incomes and skills. While fifty years ago in the UK the majority of the population were working-class, now the distribution curve has shifted decisively upwards, and the majority of the population are 'middle-class'. This upward shift has correlated with (and, we would argue, been driven by) the expansion of formal education.

Horizontal mobility is substantially a consequence of individuals aiming to improve their lives by relocating to jobs with better salaries or conditions, and to pleasanter environments. Horizontal mobility is also facilitated by the expansion of formal education, which not only makes people more employable, but inducts them into the wider educated culture and weakens their traditional ties to local community. In a competitive society, the resulting horizontal migration of the most able and ambitious individuals will tend differentially to 'punish' employers (and societies) that are characterised by repressive or coercive conditions (low wages, bad conditions, racism, sexism etc.).

Social mobility in a modernising society does not so much solve social injustice as starve it; and it is notable that the worst examples of social injustice tend to be concentrated in the least modernised, least mobile sectors of society and the world. If the slogan of socialism is (to paraphrase US union leader Eugene Debs) 'Rise with your class, not out of it', then mass higher education offers the alternative exhortation 'Rise out of your class, not with it'. Social progress comes from the sum of many such individual ascents. We therefore suggest that a major reason why the social scenario in modernising countries has turned out to be so much better than predicted by socialists has been the ever-increasing educational level of the population as a whole. Education is the missing explanatory variable. A modernising economic system is implicitly orientated around an assumption of continually increasing average cognitive skills in the workforce. This skill escalation leads to an increased value of the 'average' individual worker, and the social system adapts to this greater value – which brings advantages even for those who lack such skills. By contrast, in early medieval times (and other traditional agrarian societies) the 'average' peasant worker was little more than a trained beast for repetitive agricultural work, and was valued accordingly lowly by the socio-economic system.
In conclusion, it seems that educational expansion has increased the value of individuals to the economic system, the economic system has then adjusted to assume this increasing value of individuals, and this has enhanced the power of individuals to secure decent working conditions. The implication is that social policy should aim at continual educational expansion not only for its economic advantages, but also for its humane benefits.

The future

The UK university system does not make much sense at the moment, and has for two decades been characterised by profound professional and institutional malaise. We assume that the system is in transition, and our hope is that the UK is headed towards an explicit adoption of the US model of higher education. Such a policy acknowledges the inevitability of eventual international convergence, and recognises the overall superiority of the US system over its rivals based on the unique combination of an ever-widening mass social inclusion in colleges, with possession of the best research institutions in the world. As well as formally adopting the US qualification structure, further factors necessary for the UK to gain the dynamism of the US system would be a mixed system of public and private funding (mainly coming via student fees), and that institutions should have stronger leadership to generate the institutional autonomy which is necessary for increasing diversity. From these changes increased competition would follow: both between institutions and between academics.

Perhaps the single most important thing that the UK needs to learn from the US is a different and more positive-sum attitude to formal education. In English universities it has sometimes seemed that if you could not get the ‘ruling class’ imprimatur of a degree from Oxford or Cambridge, then there was not much point in bothering with anything else. By contrast, although everyone in the US knows that getting a Bachelor of Arts from Harvard college is much better than an associate degree from the local community college, there is little doubt that community college is much better than nothing. Indeed, any experience of college education, even if the student has dropped out, is regarded as better than no college experience at all. This positive-sum attitude to higher education is rational, because if higher education is a good thing, then even a little bit of it is worth having. The traditional UK insistence upon every student completing their degree or else leaving in disgrace serves to exclude ‘bad risk’ students from getting even the chance to receive higher education. Yet these bad risk individuals
include those students with financial difficulties who need to work, students with family commitments (e.g. single parents), and students without a family background in HE – in other words, precisely the students that stand to benefit most.\textsuperscript{34}

Education is such a powerful engine of social transformation because it uses the zero-sum game of seeking enhanced status through more education, to drive the positive-sum games of improving individual lives and benefiting society as a whole. But the positive-sum game is the most important. Recent debate on UK higher education has been excessively focused on comparisons between classes and institutions, and has failed to acknowledge the transformative possibilities of educational expansion. Attention needs to be redirected towards a new recognition of the individual and social benefits of ever more education for ever more people.

Notes

This essay has been substantially influenced by the work of Martin Trow of the Goldman School of Public Policy, University of California at Berkeley.


3 Charlton and Andras, \textit{The Modernisation Imperative}.


5 Charlton and Andras, \textit{The Modernisation Imperative}.


9 Charlton and Andras, \textit{The Modernisation Imperative}; Stanovitch, \textit{The Robot’s Rebellion}.

10 Bruce G. Charlton and Peter Andras, ‘The Educational Function and Implications for Teaching of Multi-Disciplinary Modular (MDM)

11 Ibid.
12 Gellner, *Plough, Sword and Book*.
13 Wolf, *Does Education Matter?*
15 Wolf, *Does Education Matter?*
16 Charlton and Andras, ‘Auditing as a Tool of Public Policy’.
18 Robert Wright, *Nonzero*.
19 Charlton and Andras, *The Modernisation Imperative*.
22 Oreopoulos, ‘The Compelling Effects of Compulsory Schooling’.
23 Charlton and Andras, *The Modernisation Imperative*.
24 Charlton and Andras, ‘Auditing as a Tool of Public Policy’.
25 Charlton, ‘The Inequity of Inequality’.
27 Ibid.
28 Ibid.
29 Ibid.
32 Martin Trow, ‘Comparative Perspectives on American Higher Education’.
34 Ibid.