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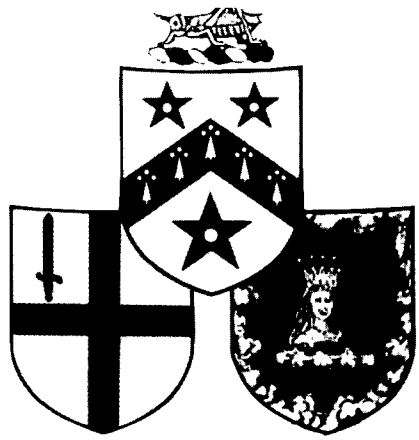

EDUCATION FOR ENTERPRISE

Lecture 6

JUST HARDCORE WRITING CODES

by

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Tom Cannon: Mercers' School Memorial Professor of Commerce at Gresham College

Just Hardcore, Writing Codes

"Quite Inappropriate" or Not?

The overall theme of the lectures this year is the link between education and enterprise or entrepreneurship. Throughout the series of lectures, four themes have emerged. The first is the importance in the mythology of entrepreneurship of the notion of the self-made man or woman. The literature is full of descriptions by entrepreneurs themselves of their alienation from traditional educational processes. One of today's most prominent entrepreneurs – Richard Branson – expresses his view that he:

> *Felt, like all kids do, that the education we were having stuffed down out throats was quite inappropriate to what we were interested in and what was useful as far as the outside world was concerned.*

Over a hundred years earlier, Carnegie came at the issue from a different direction but reached a similar conclusion. He argued that those without the advantages of education had an edge when competing in the rough and tumble of the entrepreneurial marketplace.

> *Look out for some boys poorer, much poorer than yourselves, whose parents cannot afford to give them the advantages of a course in this institute, advantages which* ***should*** *give you a decided lead in the race – look out that such boys do not challenge you at the post and pass you at the grand stand. Look out for the boy who has to plunge into work direct from the common school and who begins by sweeping out the office.*

This world view has many attractions for independence seeking entrepreneurs. They have, in effect, won their way on their own efforts and owe little to the wider community.

Second, this view has much appeal to the wider society. It creates a distance between the world of education and the world of commerce, or at least those sectors of the world of commerce linked with entrepreneurial achievement. For many British policy makers and writers on education this appealed to both their world view and the beliefs about the purpose of education. Stephen Fry's recent comment that:

> *...The competitive spirit is an ethos, which it is the business of universities such as the one in which I have the honour to move and work, to subdue and neutralise...*

echoes down two hundred years of educational writing from Chesterton to Arnold, through Hardy and Bennet. Rejecting thoughts of a positive link between entrepreneurship and education fits well with the self image of the entrepreneurs and the wishes of many in education.

It is, however, clear from the third strand of these lectures that the empirical evidence on the links between entrepreneurship does not support these assumptions or aspirations. Longitudinal studies of entrepreneurship suggests that there is a link between education and entrepreneurship. This exists on several levels. There is, for example, the powerful link between technological change – often emerging from universities – and rates of business formation. Shane argues that[1]

> *"Technological change enhances new venture formation by creating new opportunities for combining resources in new ways to create new production functions (Aldrich, 1979, 1990; Astley,1985; Wilken, 1979; Reynolds, 1991; Cross, 1981; Gould & Keeble, 1984; Tushman & Anderson, 1986; Brittain & Wholey, 1988; Mason, 1989; Romanelli, 1989; Dean, Meyer & DeCastro, 1993). In addition, empirical evidence has also been gathered which supports this view. Blau (1987) has shown that changes*

[1] Shane, S. "Explaining variation in rates of entrepreneurship in the United States: 1899-1988." Journal of Management, Sep-Oct 1996 v22 n5 (35)

in technology are associated with changes in the rate of self-employment in the U.S.; Brittain and Freeman (1980) have shown that new organisational formation is influenced by technological change."

This link is borne out by Shane's research into the lead factors in new firm formation. His research shows that:

Rates of entrepreneurship change over time in a non-random manner. These changes appear to be a function of the rate of technological change

Technological change is, for example, more important in determining the rate at which people seek to and succeed in creating new business than, for instance, interest rates. There is a link, albeit weaker, between new business formation and survival rates and educational attainment levels. As Shane points out:

Education is positively associated with the tendency to be an entrepreneur possibly because the entrepreneur may find a higher rate of return on his or her educational investment when self employed than could be obtained as an employee[2]

Other studies have found that this tendency is stronger among women than among men. There is, also, evidence that new firm formation tends to occur in places where there are clusters of colleges and universities. This prompted Stinchcombe[3] to conclude that

Literacy and schooling raise practically every variable which encourages the formation of organisations and the staying power of new organisations.

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[2] Shane, *ibid*

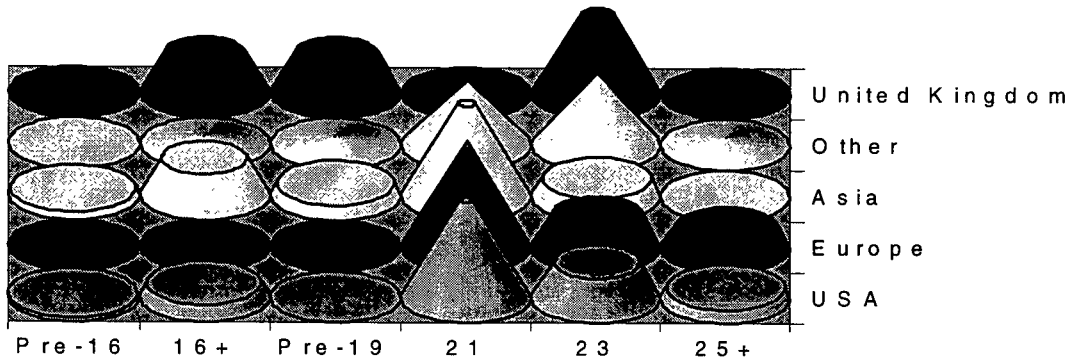
[3] Stinchcombe, A. (1965). Organizations and social structure. Pp. 142-193 in J. March (Ed.), Handbook of organizations. Chicago: Rand McNally.

Dramatic support for this notion of staying power was provided by Dolinsky *et al's*[4] analysis of the effects of education on the survival, as entrepreneurs, of people with different levels of educational achievement. They found that

> *The incidence of self employment, as measured by the percent of total person years spent in self employment, increases dramatically with increasing levels of educational achievement. It increases from a total of 2.3 per cent for the least well educated to 3.7 per cent for high school only graduates to 5.7 per cent for those with some college or higher education.*

Images of Reality

Data gathered for earlier lectures indicates that, many of the most successful contemporary entrepreneurs continued in education beyond secondary into higher education.



This data is wholly consistent with earlier data gathered by Collins and Moore[5]. They found that in the 1960s, almost two thirds of all entrepreneurs in

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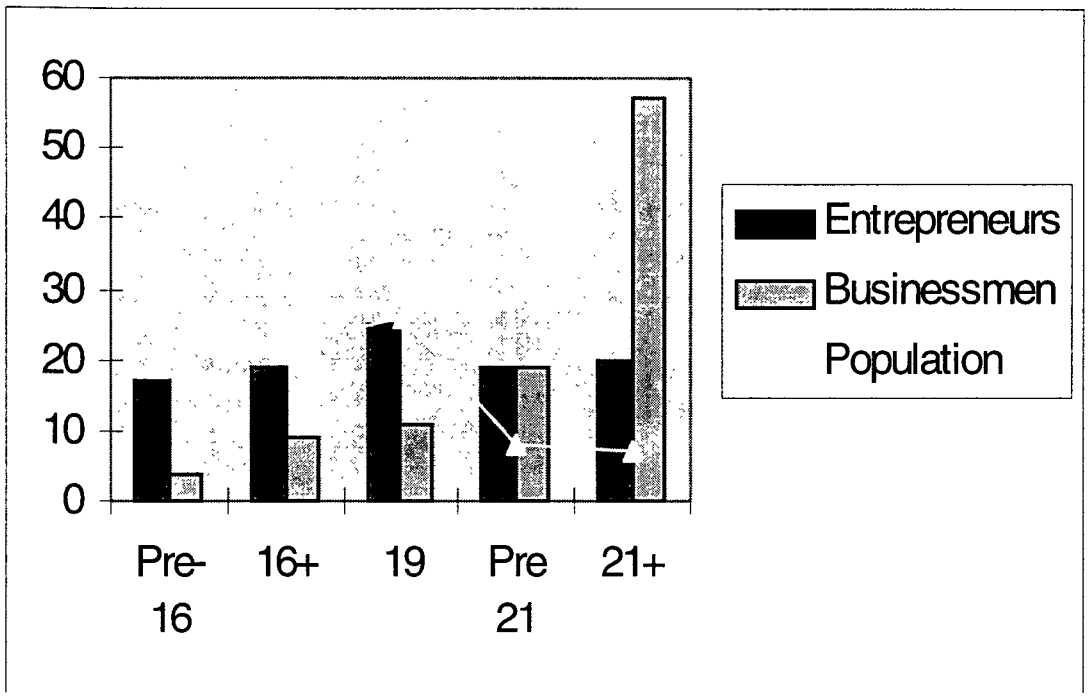
[4] Dolinsky, A.L., Caputo, R.K. and Pasumarty, Q.H. (1993) "The Effects of Education on Business Ownership." Entrepreneurship: Theory and Practice, Fall.

[5] Collins, O and Moore, D. (1970) *The Organisation Makers* New York Meredith

their study had completed education beyond high school while almost forty per cent had some college education or were college graduates. Although they were less likely to have college degrees that leaders of more traditional corporations, they were three times more likely to have a degree than members of the total population.



An even earlier examination of the US business elite between 1900 and 1910 by Miller indicated that they were not typical of the US population. They were far more likely to be drawn from a background of affluence and education. Although this study includes chief executives as well as entrepreneurs, there is no indication that the sample was distorted by their presence. Interestingly, a recent study by Temin of the contemporary business elite[6] indicates that the composition of this group has changed far less significantly than other elites e.g. the political, in its composition and background.

The fourth strand of this series addresses the type of policies and the nature of the interventions which are most effective at supporting enterprise and

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[6] Temin, P (1997) *The American Business Elite in Historical Perspective* Historical Paper No. 104 National Bureau of Historical Research, Cambridge, Mass.

entrepreneurship through education. It would seem that three broad issues come together to affect policy in this area:

First; the world is experiencing a sharp increase in the rate of technological change. Almost regardless of the measure – patent or license registrations or rates of introductions of new products, processes or services – the picture is consistent. This contemporary pattern of technological change differs in several important ways from previous, similar eras. First, intangibles, especially those based on some form of intellectual property rights, are more important. Second, barriers to the free movement of these goods and services are harder to establish and control.

It was relatively easy to stop Lancashire cotton workers and mechanics transferring their technologies, knowledge and skills abroad. It was harder to stop new developments in electrics, chemicals or vehicles reaching potential rivals during the last industrial revolution. It is almost impossible to stop new software developments being disseminated rapidly and extensively today. Finally, the numbers of countries, companies and communities competing for access to this technology has rapidly increased. In this environment, the alternative to indigenous firms exploiting new opportunities is not their control until local ventures take them up, but their rapid movement elsewhere.

An Optional Extra?

In this environment, education for enterprise or entrepreneurship is not an optional extra but a central plank in the search for industrial competitiveness and widening economic opportunities. In current government parlance, it ought to be the point at which Competitiveness strategies and The New Deal come together.

High rates of participation in Further and Higher Education would seem to provide the gateway into new opportunities for graduates and new routes to competitiveness for the community. The UK's historically low rates of participation would appear to be a barrier to success. The most dynamic countries – in terms of new business formation and / or growth – have much

higher rates of educational participation.

There is some evidence that rates of new business formation among graduates are linked with:

- Subjects – with Engineering- and Business-related subjects more likely to stimulate early, successful and, where necessary, repeat start-up than science, the arts and humanities;

- Mentors and Models – institutions that have structures for mentoring graduate starters or where there are models for success are more likely to produce high rates of business formation;

- Clustering – when clusters of strong, externally active HE institutions exist there is likely to be a high rate of new business formation by locals (from within academic community) and high rates of inward migration by prospective entrepreneurs;

- Finance – availability of local finance for "academic enterprises" is closely associated with success in the Bay Area of San Francisco, Boston and Cambridge (England).

In sum, a community seeking to stimulate strong, high added value new or growing businesses seems to need high levels of participation in supportive HE institutions. Early creation of new business by those leaving HE is likely to be a minority activity for the foreseeable future. This highlights the problems of education for enterprise for those currently working in different types of enterprise.

The Pain and The Gain

There is considerable evidence that individuals gain considerable material and other benefits from their training and development. Bennett *et al*[7,8] found

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[7] Bennett, R. , Glennester, H. Nevison, D. (1992) *Investing in Skills: Expected Rates of Return to Education in Britain* Doc-LSE/Suntory-Toyota Working Paper 83 November

[8] Bennett, R. , Glennester, H. Nevison, D. (1993) "Regional Rates of return to Education and

a positive rate of return "from obtaining even the lowest vocational qualifications.[9]" The returns increase sharply as individuals move up the ladder of qualifications. Interestingly, this research suggests that the greatest increases in return accrue to those from the most disadvantaged economic backgrounds – those least likely to take up these opportunities.

It is much harder to quantify the returns to organisations. There is some evidence to suggest that survival rates are higher for firms that engage in significant pre-start-up training. There is, also, evidence that more extensively trained workers have higher levels of productivity, especially with higher added value products or services. Data, also, exists which suggests positive links between education, training and development and product quality, market share and profitability[10].

The central problem for entrepreneurs is that they operate in both areas. They are simultaneously individuals seeking a private return and businesses looking for a return to their organisation. It is, also, suggested that:

- They require specific competences which can be acquired through training and development
- Distinctive features of their behaviour, personality and life/work style demand specific forms of development provision.

Traditionally the core skills associated with entrepreneurial success have included; interpersonal skills, specific enterprising behaviours, operationalism especially multi-task, multi-role behaviours, innovativeness, functional capabilities, insight and trust building. The distinctive forms of provision are those based of short feedback loops, action learning, work-based activity and high levels of mentoring

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Training in Britain" Regional Studies Vol 29 No. 3

[9] Tamkin, P and Hillage, J, (1998) *Management Development in the UK* Institute for Employment Studies, London, mimeo

[10] Cannon, T. (1997)

Conclusion

In the opening lecture of this series, I outlined the argument entrepreneurship requires little of education. This lack of demand was linked with the independence which many entrepreneurs crave. In the research and analysis which has accompanied this research, it has emerged that not only is there nothing incompatible between education and entrepreneurship but the scope for independence is increased with more effective education for entrepreneurship.

It is clear that entrepreneurial talent can be accommodated by the education system. In a sense the data described in these lectures shows that this has always been the case. It is suggested here that the fit can be improved on a number of levels for different entrepreneurial grounds. For these in the formal system the composition of the subject mix, mentoring, role models and "clusters of resources" have an effect. For those outside the system – in work or not – an understanding of their nature, the distinct competencies needed for success and the appropriate forms of provision are essential. These latter will, almost inevitably, be work or action based with clearly defined feedback loops into business performance.

Achieving this mix is increasingly important especially as smaller, entrepreneurial firms play an increasing role in the constant regeneration of the enterprise in a knowledge-based society. Entrepreneurial success is increasingly based on an ability to constantly regenerate the knowledge, skill and capability base of the enterprise while following these routes to wealth and success creation.

Research has identifies five, knowledge based paths to wealth and success today. First there is the ability to understand and adapt to the distinctive anthropology of the time. The second element in success is the ability to build a vision that is in tune with this anthropology. The creation of a vision that enriches others sharing the vision is the third element in the success. In an information-rich environment, such as exists today, the successful transmission of data and use of IT provides the fourth success factor. These

are hard to separate from the fifth variable – the skills to transform the enterprise so that the organisation can get to the future, first.

Those entrepreneurs and their host communities that get to the future first have some common features. They do not rely on convention. They see that conventional thinking is centred on the past and usually reflect the capabilities of currently dominant organisations. There is evidence that high growth organisations keep their eyes on enabling knowledge. They recognise the importance of enabling technologies in creating opportunities to extensive business development.

The most successful concerns wed an entrepreneurial approach to the ability to spot large business gaps and deploy the resources to exploit these opportunities. Incremental developments have less value in revolutionary change. The fluidity of the environment places a premium on the ability of managers and leaders to lead, wheel and deal, and in the process redefine the environment to maximise their opportunities. The sharp increase in competitiveness at times of rapid change calls for an increase in competitive drive across the enterprise. The central irony of this type of change lies in the need to innovate and change with little knowledge of likely outcomes. The ultimate paradox is that we must act now but we do not know the likely result of our actions but that is the central paradox of entrepreneurial behaviour

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