In search of the public sector entrepreneur.

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IN SEARCH OF THE PUBLIC SECTOR ENTREPRENEUR

Inger Boyett

SECTION ONE


Malinowski, B. (1989), A Diary In The Strict Sense Of The Term, Stanford University Press, Stanford, CA.


SECTION TWO: CONTENTS


This collection of papers and cases seeks to provide a focussed picture of a programme of research into an area of management activity which had previously been ignored by academia - public sector entrepreneurship. Hence, they not only add significantly to the entrepreneurship literature, but also open up an area of research not hitherto explored.

Entrepreneurship itself has been debated from the stand points of economics, psychology, sociology and behavioural science since its definition by Richard Cantillon in 1734. The entrepreneurship literature base is broad, but centred firmly around the small business, with only occasional forays into the not-for-profit sector and then only where the activity, in all senses but that of creating a shareholder profit, emulates that of the small business.

The collection is divided into five main areas:

- first, a critical appraisal of the collection providing the strategy and methodology of research;

- next, two papers relating particularly to the initial surveys undertaken in the school and health sectors, ‘These papers are particularly important because, through unadulterated survey, they provide the first indication that the sectors themselves recognise the existence of entrepreneurs within their midst.

- The next grouping develops the information gained from the surveys and adds to it much richer research case material. Possible externalities in the form of community entrepreneurship are also explored.

- The next section contains examples of published case studies in each of the
public sector areas within the research strategy area.

- The study culminates in a paper advancing the first published definition of the Public Sector Entrepreneur.

- The final section includes a paper and conclusion providing an indication of the ongoing research direction and a move towards a more deductive perspective.

The collection also provides a description of the changes which have occurred in the public sector relevant to the arguments and analysis within each paper. Similarly, each paper provides a synopsis of the relevant literature to enable the analysis and discussion of the research activity reported.
SECTION ONE: CONTENTS

Abstract

Introduction

The Research Study - A Critical Appraisal & Commentary

Part One - Determining the existence of the public sector entrepreneur


02 "The Quasi Market, the Entrepreneur and the Effectiveness of the NHS Business Manager.” Public Administration, Vol. 73, No. 3, Autumn 1995.

Part Two - Triangulation through methodology


Part Three - Externalities and Tangential Data

Part Four - The Cases


Part Five - A Definition


Part Six - Modelling the Entrepreneur


Post Script

References
INTRODUCTION

WHAT IS ENTREPRENEURSHIP?

Entrepreneurship, as an academic study, encapsulates research endeavour and a literature base which spreads across a number of discipline areas including: economics; psychology; management and sociology. From these diverse standpoints a wealth of theory has been developed since the first definition of the term (Cantillon, 1745). However, the diversity of this hybrid study has also meant that no one finite definition of the entrepreneur has emerged.

This of course allows researchers sufficient flexibility to determine for themselves the paradigms which will prevail within their research study. Hence, it is important to state at the beginning of this collection that the Entrepreneur being sought is defined in essence by the author as:

- An individual who takes an innovative role in bringing to an organisation new markets, products, processes and structures (Schumpeter, 1934);

- ‘Someone who specialises in taking judgemental decisions about the co-ordination of scarce resources’ (Casson, 1982);

- A leader who can not only perceive worthwhile opportunities, but can also act upon them (Binks and Vale 1990);

- A person who displays specified entrepreneurial characteristics and behaviours (Gibb, 1987).
It is also important to state that from the author’s point of view the Entrepreneur, to be so classified, has to have had a successful outcome to their entrepreneurial activity. This may be a single or number of short term ‘project’ outcomes or a longer term ‘organisational’ outcome.

Whilst there is extensive literature in relation to the entrepreneur and entrepreneurship emanating from single academic disciplines, there is in fact very little research activity that attempts to view these special individuals from an integrated multi-disciplinary approach. Additionally, all the literature centres around the business entrepreneur, with only some small consideration being given to those leaders operating in the not-for-profit sector. Indeed, until the commencement of this research study no academic credence was given to the notion of a public sector Entrepreneur’s existence.

Hence the main outcomes of this study are an addition to the theoretical stock of entrepreneurial knowledge through an integrated, inductive and deductive approach to paradigm development; evidence that entrepreneurs do exist in the public sector; the development of the first definition of the public sector entrepreneur - illustrating the similarities they share with their business counterparts and the differences that make them a separate, notable breed; and finally the development of an economic model of the public sector entrepreneur which provides the basis for future research and development in this area of entrepreneurship research.
The general research strategy which provided the foundation of this study has evolved over the period 1991 - 1996, but can be modelled ex-post.

**Figure 1: Research Strategy**
Initially however, the research aim was simply to test for any evidence to substantiate the author’s belief that the changes in the public sector - most notably the introduction of quasi-markets and devolution of control to unit level - had in fact led to an emergence of entrepreneurial activity. All of the predictors seemed to suggest that, if the same turbulence had occurred in a business market (Kirzner, 1973), a spawning of new entrepreneurs would be expected.

A combination of qualitative and quantitative research methods were utilised, particularly appropriate for exploring what could be a new phenomenon (Jick, 1979; de Vaus, 1991; Dempsey & Dempsey, 1992; Miles & Huberman, 1994).

The overall methodology employed for this study was then based on two techniques of data collection. Firstly, a two stage questionnaire survey. Secondly, in depth case development - predominantly through semi-structured interview.

Three main areas within the public sector were identified for initial data collection: schools; health service trusts and universities. Additional case development occurred to supplement the three basic areas of study and to provide a better understanding of how the research findings might be extrapolated. The inductive nature of the initial study, suggested the introduction of some form of triangulation to test results. Two of Denzin’s (1978) basic types of triangulation were utilised: data triangulation and methodological triangulation. The repetition of the surveys within different, but analogous, areas of the public sector would, it was hoped, provide comparative data sets. The case studies contributed a qualitative element of research giving an ".. understanding of lived experience" (Janesick, 1994) tangential to the empirics.

The research activity began in 1991 with the decision to initially concentrate on the state school sector. This decision was made simply because of experience and familiarity with that particular area of the public sector.
Figure 2: Triangulation through data and methodology

DATA TRIANGULATION

METHODOLOGY TRIANGULATION

School Head Teachers

Survey 1

Case Research
Bob Salisbury, Garibaldi School

NHS Business Managers

Survey 1

Case Research
Laurie Caple, Ambulance Manager

University Vice Chancellors

Survey 1

Case Research
Sir Colin Campbell, Vice-Chancellor

Other areas of the public services

Case Research
Finnish National Hockey Team

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PART ONE -
DETERMINING THE EXISTENCE OF THE PUBLIC SECTOR
ENTREPRENEUR

Papers 1 and 2: ‘The emergence of the educational entrepreneur’ and ‘The quasi-market, the entrepreneur and the effectiveness of the NHS business manager’.

The survey process utilised to begin the research study was based on a policy delphi used by Gartner (1990) in his United States survey of academics, business leaders and politicians. The aim of his study was to discover the definition by each of these groups of the term ‘entrepreneurship’, and then to provide a generalised definition of the colloquial understanding of the term.

This method of data collection seemed particularly appropriate where the aim was to derive uncorrupted information from practitioners about their perceptions and understanding of the ‘entrepreneur’ within their sector. Not only was the term itself not normally associated with management roles in the public sector, but additionally the whole concept of managerialism was so new to the incumbents that it was hoped that, by initiating a ‘sample directed’ survey, potential differences between public and private sector understanding could be highlighted.

The sample to be surveyed, it was felt should attempt to reflect as much as possible the general population of head teachers and schools. Hence, it was decided to base the examination on the East Midlands - Nottinghamshire, Leicestershire, Lincolnshire, Derbyshire. The advantages of this geographical area was not just its proximity to the base of research, but also that it encompasses a mix of urban, rural and suburban schools. It was also decided to survey all levels of state school provision within the chosen region - nursery, primary and secondary. Although, organisationally the large secondary school is very different to the small nursery school, it was felt that the implications of the 1986 and particularly the 1988 Education Acts
had been of almost equal impact on the head teachers of both. Hence, the first survey was undertaken in 1991 by sending a letter explaining the purposes of the research, and with an added single sheet asking for a definition of the ‘Educational Entrepreneur’, to 1000 of the identified head teachers.

The response rate was 22%. The definitions provided were factor analysed into 77 different criteria and then, for ease of both analysis and the user friendliness, grouped into six categories:

- Personal characteristics
- Role management
- Leadership skills
- Organizational skills
- Financial skills
- Operational skills

The initial respondents were then recirculated with the request to answer three questions in relation to each of the criteria:

1. How important is this attribute?
2. How has the weighting of these attributes changed since the introduction of the Local Management of Schools?
3. What restricts the development of these identified attributes associated with educational entrepreneurship?

To answer these questions they required to rank each of the criteria on a scale of 1 - 10. 65 of the sample responded. In total only 6.5% of the original sample had completed both questionnaires.

The response rate was disappointing, which coloured the methodology changes in the later repeat surveys, but the sixty five respondents did at least provide a sample, which when
broken down by school types, was very similar to the breakdown in the total population.

The second series of surveys in the national health services were initiated in 1993. Again, the study was based on the East Midlands of Britain, this time a sample of Business Managers in trust hospitals within the Trent Regional Health Authority was identified to be surveyed. The initial sample numbers available were much lower than had been used in the schools and hence the importance of a good rate of return was considered paramount. In order to encourage this, the initial methodology was modified to the extent that the full sample, rather than just the respondents to the first questionnaire, were sent the second questionnaire.

The first survey was sent to the seventy-four Business Managers employed by 1st or 2nd wave trusts in the region. The response rate was 20.3%, almost mirroring the experience in the schools survey, despite the added complexity and length of the health questionnaire. Utilising exactly the same method of functional analysis, a second health questionnaire was generated from the responses to the first. The strategy of sending questionnaire two to all of the initial sample members did provide a far better second phase response, 39.2%.

The second questionnaire had also asked respondents to indicate their willingness to participate in an interview with members of the research team. A number indicated a considerable interest in discussing their feelings further and eight interviews were undertaken of approximately 90 minutes duration each. The interviews were taped with the interviewees permission and transcribed in full for subject checks.

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1 Units where the change to Trust status had occurred, hence providing the devolution of responsibility/control thought likely to encourage entrepreneurial activity.
Conclusion

The two papers within this section describe the outcomes of the surveys in the education and health sectors - that Public Sector Entrepreneurs do indeed appear to exist and that they have a crucial function within their sectors. As discussed at the start of this collection there was no previous literature which related to the concept of public sector entrepreneurship. ‘The Emergence of the Educational Entrepreneur’ was in fact the first published paper in the UK, if not globally, which presented the idea of public sector entrepreneurship for discussion.

One of the papers’ strengths is that they provide the uncontaminated views of the practitioners, as to their understanding of what an entrepreneur in their specific area would constitute. The preliminary research in the area of education appeared to provide not only the sought after evidence of entrepreneurial activity, but also highlighted the possible importance of the design of structural changes in encouraging or constraining such activity. Also, that the entrepreneurs who seemed active in the public sector, had similarities to, but did not appear to be pure clones of their business colleagues.

Repeating the same research in the health sector generated similar indications of activity and increased the need for greater in-depth study to allow the possible definition of this new species of entrepreneur and potential recommendations to policy makers of the most conducive sector management to encourage entrepreneurial growth.

Through analysis of the literature these two papers provide the first arguments that the prevailing business entrepreneurship theory does not preclude the existence of the public sector entrepreneur - in fact the types of environment, psychological and behavioural attributes normally associated with business entrepreneurs correspond closely to the reported public sector situations.
PART TWO -

TRIANGULATION THROUGH METHODOLOGY

Papers 3, 4 and 5: 'An English case of educational entrepreneurship',
'Corporate governance and the school head teacher'.
and 'New culture, new leader, old university'.

"Case study researchers have often been very apologetic about the external
validity of their findings, but there is a growing view that such diffidence may
be unwarranted." (Bryman, 1994)

The case development in this programme of study was not intended to prove theory, but rather
to provide a greater understanding of the phenomenon under investigation (Glickman, 1985)
and help to make theoretical connections apparent (Bresnen, 1986) whilst providing a research
'grounding' (Glaser & Strauss, 1967). But the question of potential generalisability was still
perhaps the most important likely criticism. However, there was to be no suggestion that each
case should be viewed as a sample of one, but rather that, whilst the survey results would
provide some possible statistical generalisation, the case studies would be focussed on
analytical generalisation (Yin, 1984 & Mitchell, 1983).

Although it was proposed initially to draw suitable case organisations from the various survey
samples, in practice each was developed after attention being drawn to them by media reporting
or through verbal recommendation by practitioners in the field. The assumption was then made
that such extreme examples, having gained some 'notoriety', would probably provide the best
case examples to aid the initial development of a definition of the public sector entrepreneur.
This experience bears out the suggestion that case organisations tend to be selected through
convenience, rather than their representativeness (Freeman, 1986 & Schwab, 1985). But when
attempting to expand the number of studies, to promote a leverage on generalisation (Bulmer,
1979), the reluctance of many organisations to become involved indicated the advantages of
approaching units who had already given indicators of their pleasure in 'showing off' what
they had accomplished.

In order to assist later comparative study between the case studies, a framework of four dimensions utilised by Gartner (1985) was modified to provide a generic base for each development. Thus the interviews were to be structured around the objective of collecting data on:

- The individuals involved in the entrepreneurial activity;
- The activities undertaken by those individuals during the entrepreneurial process;
- The organisational structure, culture and strategy;
- The environmental context.

It was recognised that there are dangers in interviews, their validity being questionable because of the influence of the interviewers themselves (Malinowski, 1989; Kahn & Cannell, 1957; Wax, 1960 & Deutscher, 1968). However carefully the interviews were conducted to eliminate bias or contamination, it was interesting to note that the strategies were not always successful.

In 1995 the survey process previously described was repeated with the 106 Vice-Chancellors/Principals of Universities in England and Wales. The usable response rate was 34%. It is perhaps interesting to note that actual responses were received in total from 97% of

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2 Even in the case of the head teacher of Battersea School, whom the author would describe as the antithesis of an entrepreneurial ‘success’, the incumbent was not only happy to invite cameras into his organization, but was “Very pleased ...” with the tv programme outcome.

3 For example, during the first interview with the head teacher of Garibaldi school the terms entrepreneur, entrepreneurship and entrepreneurial were not used by Bob Salisbury. In the next interview, after a number of informal conversations between him and the interviewers, the terms were liberally salted within the transcript to describe his activities!
the sample. The difference was made up of: unusable returns (11%), seemingly personally dictated letters explaining why the respondent had no time to complete the questionnaire (39%), or that they did not on principle take part in research exercises (13%).

**CONCLUSION**

Whilst the first two papers in the collection provide evidence as to the existence and function of the Public Sector Entrepreneur, the three within this section are specifically concerned with developing evidence about the entrepreneurial individual within the organisational process. The case developments allow the papers to provide initial indications as to how entrepreneurial activity is initiated, the structures which appear to maximise the Entrepreneurs’ chances of success and the constraints imposed upon them.

A particular strength of the papers is that they provide a depth of meaning and interpretation of the values of the participants which is not possible from the initial surveys. Additionally from the school based paper, the concepts of the ‘bobbing corks’ and analysis of the school’s multi-layered decision making process provided an opportunity for the first tentative analysis of the types of processes and systems in place within public sector organisations boasting entrepreneurial leaders. These first steps provided the impetus and basis for a focus of the continuing research on one of the relationships later defined as pivotal to the Public Sector Entrepreneur - between themselves and their followers.

The paper developed around the research undertaken at the University of Nottingham provides analysis of the entrepreneurial activity in a far larger organisation than that of schools. The determination of structures, systems and the leader/follower relationship is again highlighted as

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4 *Cynicism might suggest that the return name of a University of Nottingham Pro-Vice-Chancellor on the reply paid labels, drew a polite response if not actual completion of the questionnaire.*
significant elements of the Public Sector Entrepreneur’s role. But, it is also clear that in a large organisation, where the leader’s influence is perhaps less direct, changing the internal environment can be a harder task for the potential entrepreneur.

‘Corporate Governance and the School Head Teacher’ is particularly significant in that it strengthens the argument of parallels between public sector entrepreneurship and business leadership, corporate governance and management. The first suggestion of the importance of the potential resource relationship between the external environment and the Public Sector Entrepreneur is highlighted. Where a balanced relationship is disturbed, even the most entrepreneurial head teacher will not have a successful outcome to their endeavours.
PART THREE -
EXTERNALITIES AND TANGENTIAL DATA

Paper 6: ‘The pillar of the community - back to entrepreneurial basics’.

During the case development it became clear that some of the public sector entrepreneurs studied seemed to have additional externalities beyond their core role. They appeared to be particularly active in the economic regeneration of their surrounding communities and were fulfilling very effectively the role of ‘community entrepreneur’ (Cromie, Birley & Callaghan, 1993). The first indications came from the developing longitudinal research relationship with the Garibaldi School. When producing a video to accompany the case the impact of the head teacher’s activities on the local community were first suggested by stakeholders interviewed to camera:

“I was an unemployed miner with no prospects. Now I am studying for my ‘A-levels’ and I have got a place at Nottingham Trent University to do a social work degree. In four years time I will be a social worker and my family will be off benefit. If Bob Salisbury hadn’t had the idea of getting adults back into the classroom with the kids, me and my family would have been dependant on handouts for the rest of our lives.”

“I have always been into body building and sports, then Bob came to me and said that they wanted to provide a gym for the kids. If he found a suitable space in the school and a way to get the equipment would I run the area for him. A sort of franchise I think it is. I work with the kids some of the time, but then I also run it as a local gym. I’ve got a business that is growing and the school got their gym and some income from their share of my profits.”
This paper highlights the impact the Public Sector Entrepreneur can have on the local economy, again a totally new concept. Additionally, it moves the existing business linked community entrepreneurship literature into a totally new area. Whilst in some ways tangential to the core research study, further investigation in this area and the development of a stream of cases highlighting community entrepreneurs has provided a wealth of background information which has informed later work, both when exploring the entrepreneur/external environment relationship and entrepreneurial leadership characteristics.

This paper’s is probably most significant in the implications it has for the UK’s policy makers. It suggests that school’s have a pivotal influence on their local economies. That resources used to encourage the development of entrepreneurial head teachers will not only have an impact on the ‘products’ of the organisations - measured by such things as examination results, but may also provide a catalyst for economic regeneration within their community.

Cases developed include: Sir John Hall, Newcastle United Football Club; Dick Atkinson, St Paul’s School, Balsall Heath; The Finnish national hockey team; and Richard Budge, RJB Mining plc.
The first papers have established the existence and indications of the scope of public sector entrepreneurial activity. Progress towards defining the entrepreneurial breed was undeniable, however it was felt necessary to produce a series of publishable full case studies to provide a sufficient depth of analytical sample. These particular cases involved greater levels of investigation and in most cases the initiation of a longitudinal relationship with the sample organisations. This mitigated the problems of 'snap shot' views and ensured that a greater level of understanding was achieved in relation to the actors’ views, the organisational meanings and processes.

The European Case Clearing House at Cranfield had no UK based public sector management cases within their collection when the Garibaldi case was first published - despite the managerialism introduced into the UK’s public sector in the late 1980’s management education did not seem to have responded very rapidly. An unpredicted benefit of the case publication was their use by a number of institutions with both public sector and business managers. The level of interest and feedback provided a valuable level of debate and criticism, alleviating the isolation inherent in researching an area without a historical precedent and seemingly no other simultaneous academic study.

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6 These include: Imperial College; the Judge Institute; the University of Limerick, Babson College, USA; Sheffield Hallam University and Warwick Business School.
CONCLUSION

The Garibaldi case is important in that it provides far greater evidence of the relationship needs between the Public Sector Entrepreneur and their external environment. Conversely, it provides the grounding for the internal leader/follower relationship which is a crucial element of the final developed definition. Similarly, when viewing the internal environment in depth it became possible to highlight the importance of organisation structures to the success of entrepreneurial activity.

The ambulance case is particularly notable in that it highlights the importance of communication within the public sector entrepreneurial role. It is also important that in an organisation so inherently bureaucratic as the NHS, there are clear indications that externally imposed constraints and resource starvation do not mitigate against the emergence of the Public Sector Entrepreneur.

The case developed around the Vice-Chancellor of the University of Nottingham again provided clear indications of the importance of the relationship of the Public Sector Entrepreneur with their environment. Whilst emphasising the ‘powerful’ leader in relation to the internal environment, it also provides evidence that where this interface is not carefully balanced and the structure provided to maximise the innovatory vision, problems will inevitably occur. There is also evidence of the need for organisational legitimation by the entrepreneur of their innovations, and the suggestion that where this is not organisationally encompassing, problems of implementation will occur. The case also contributes to the need for data triangulation into another sector of the public services and provides an example that even an organisation as traditionally conservative as an ‘old’ university can to some level accommodate entrepreneurial activity.

But perhaps the most important element of the Vice-Chancellor case for this research
programme was the realisation that Sir Colin Campbell utilised a high level of ‘manipulation’ to maximise his followers outputs. This ‘rang bells’ and led back to the work of Mark Casson (1991) and his ‘optimizing agent’. A theme which became an important element of the later research.

The Hockey Lions case was very much a one-off exploratory research foray into the international field, developed on the back of the emerging concept of the Public Services Community Entrepreneur. A main feature of the case research mirrored the experience reflected in the previous cases, that all of the entrepreneurs studied utilised a recursive, iterative process of innovatory change. It also provided clear indications that the concept of the Public Sector/Services Entrepreneur may not be purely UK specific and that widening the research field beyond Britain, at a later stage in the research programme, could provide a further method of data triangulation.
By this stage of the research programme a focussed research strategy had informally evolved based around three hypotheses:

1. Government through structural change can create elements conducive or constraining upon entrepreneurial development.

2. Public Sector Entrepreneurs are a different ‘species’ to their business counterparts and are definable.

3. Some Public Sector Entrepreneurs have externalities within their economic communities.

Also, a number of conference papers had been presented, both in the UK and internationally, and increasingly demands were being made by fellow academics to consolidate the information gathered over the last few years into a definition of the individual being described as the Public Sector Entrepreneur.

CONCLUSION

In early 1996 this paper was produced integrating the overall research outcomes to address the three proposed hypotheses and attempting to draw together all of the strands of study into an initial definition. Published in the International Journal of Public Sector Management, it utilised the Garibaldi School, Ambulance Manager, Vice-Chancellor and Community Worker cases and a summary of the survey data. In addition to developing the first published definition of the
Public Sector Entrepreneur, this combining exercise also suggested a further hypothesis which seemed to encompass the knowledge gains so far and would form the basis of the continuing study:

Within the public sector there is a three level relationship between the Entrepreneur, the Environment (or market structure) and the Followers within the organization (or culture). At each of the levels inter-relating variables either constrain or encourage the Entrepreneur to act.

The previously mentioned work of Mark Casson in relation to the leader/follower relationship, was explored in this paper and possible modifications suggested for a transfer to the public sector situation. Further development of his reward/sensitivity strands of his framework was suggested as a possible response to a potential criticism of the works so far. How did one explain the motivation of Public Sector Entrepreneurs, when clearly there was no entrepreneurial profit available? The paper tentatively suggests that the motivational force, ‘public sector ethic recognition’ is a significant avenue of reward to entrepreneurial public sector leaders and hence a pivotal motivator.
PART SIX - MODELLING THE ENTREPRENEUR


The work of Professor Mark Casson of Reading University in his studies of leader/follower behaviour (Ibid., 1991) seemed to be becoming more and more significant if one was to develop a model of the public sector entrepreneur. At this stage of the research programme it seemed important to move from an inductive approach, to a deductive perspective. Considerable knowledge had been accrued about the entrepreneurs, their external and internal environment. What was now needed was a model which could be tested against both the ‘successes’ and the ‘failures’ to provide a potential for prediction. Hence, Professor Casson was approached with a set of previously identified three-tier variables and in partnership, over the summer of 1996, a model was developed.

A pilot testing of the model was then begun. The sample area chosen, education, encompassed the head teacher of the Garibaldi School as a control and three head teachers from identified ‘failing’ and three from ‘successful’ schools. With reservations, but in order to simplify the process, the schools chosen were randomly selected from the Ofsted7 lists.

Each school was visited and the head teacher, plus followers (senior management teams), interviewed within a structure directed by a question schedule. The head teachers were then asked to complete the ‘Leader Behaviour Questionnaire’ and the ‘Interpersonal Influence Inventory’. Whilst the followers completed the ‘Personality Rating Scale’8 in relation to their

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7 Office of Standards in Education, government non-ministerial department responsible to the DfEE.

own head teacher. Each interview was transcribed and the questionnaire scorings analysed.

Table 3: The identified three levels of inter-related variables either constraining or encouraging public sector entrepreneurship

<table>
<thead>
<tr>
<th>The Environment</th>
<th>The Entrepreneur</th>
<th>The Followers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Velocity of change</td>
<td>Entrepreneurial attributes, made up of: Psychological attributes Social attributes Managerial competencies</td>
<td>Critical mass of dedicated followers required</td>
</tr>
<tr>
<td>Rate of restructuring of control towards unit level through resource ownership and authority</td>
<td>Level of personal guilt, made up of: Inherent level of sensitivity Manipulation of superiors</td>
<td>Level of personal guilt, made up of: Inherent level of sensitivity Manipulation of head teacher</td>
</tr>
<tr>
<td>Availability of resources</td>
<td>Psychological and physiological cost of giving effort needed</td>
<td>Psychological and physiological cost of giving effort needed</td>
</tr>
<tr>
<td>level of competition (chance of extinction)</td>
<td>level of self satisfaction/public sector ethic from doing public good</td>
<td>level of self satisfaction/public sector ethic from doing public good</td>
</tr>
<tr>
<td>level of manipulation/interest of society</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONCLUSION

The economic model and outcomes of the pilot study are described in the last paper in this collection. The paper makes it clear that whilst much has been learnt from the initial piloting, further large scale testing in the health, education and other public sector areas is necessary. In fact, although this is the conclusive paper in the collection it raises a whole range of further important research questions for continuing study.

The piloting has though provided a number of answers. It has shown that the model can be
grounded against reality. That the successful schools were those where each of the elements were maximised and the relationships optimised. Moving into the field of deductive research (and perhaps a partnership with an economist), it is perhaps hardly surprising that it began to be apparent that in economic terms one of the major benefits of the Public Sector Entrepreneur was the ability to reduce agency costs through the development of trust cultures, whilst at the same time having the capability to minimise transaction costs through their interaction with the external environment.

Perhaps the most significant aspect of this paper is the implied need for the Public Sector Entrepreneur to have an interactive relationship with their external environment. Returning full circle to the business entrepreneurship literature where this study started, one finds that whilst numerous academics have defined as a prerequisite of entrepreneurship the ability to scan and spot opportunities (as per the Binks and Vale quote on page 1 of this collection) none have considered that a more active two-way relationship is required. It would seem that with further research the ‘Search for the Public Sector Entrepreneur’ may not only give additional breadth to the entrepreneurship literature base, but may also significantly augment the very core of business entrepreneurship theory.
It is clear that the Public Sector Entrepreneur does exist, can be defined and can be modelled, but also that my starting point for this collection, the definition of what I considered the essence of the entrepreneur is perhaps far too simplistic. The Public Sector Entrepreneur is not just an individual with certain competencies and characteristics. They are characteristically a 'special' individual, but in addition when placed within certain external and internal environmental contexts has the personal ability to behave both proactively and reactively. This collection of my published work, should not be considered as being the end of the journey, rather that I have reached a significant first milestone along the route in search of the Public Sector Entrepreneur.