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**AN ENTREPRENEURIAL THEORISING
OF THE RECYCLING INDUSTRY**

BEE CHING GAN

A thesis submitted in partial fulfilment of the requirements of

The Robert Gordon University

for the degree of Doctor of Philosophy

2010

Dedicated to:

my father, the late Mr. Gan Chin Hong
whose love for progress and knowledge lasted till his last breath;

my mother, Madam Young Cheng Chu whose desire for education and
knowledge constantly reminded me of her love for us;

my siblings, whose support helped me persevere the storms which
prevailed during this journey.

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ABSTRACT:

The research interest for this study began with a general observation of the lack of theory-practice integration between the academic context of recycling and entrepreneurship set against the growth in the recycling industry. The research thus began by asking, 'how well does entrepreneurship explain the recycling industry?'

This research focuses on the recycling entrepreneurs' entrepreneurial experiences and their relationships with their social context. Twenty-five recycling entrepreneurs were interviewed in-depth using unstructured interviews as the primary data collection method. Inductive analysis has been applied to these data on multiple levels.

Firstly, a context (structure) level analysis identified a green culture and structure arising from social demands pertaining to environmental concerns and the corresponding political responses that gave rise to socio-cultural and economic implications. Secondly, an entrepreneur (agent) level analysis revealed that the entrepreneurs' motivation to start and continue recycling businesses was attached to a particular value perception of the recycling opportunity. This orientation underlies the different forms of opportunity constructions. Analysis at the process level drew upon the interactive processes between the preceding two levels to understand the dynamic relationship between structure and agency. The analysis demonstrated the entrepreneurs' role in manifesting entrepreneurial events via value extraction processes realised through embeddedness. This included different ways of adaptation to the green structure, adoption of green values and the forging of ties. In doing so, they imbued the structure with an apparent overarching creation of green values.

The novel analytical approach adopted for this study provides avenues of advancement in entrepreneurship research: firstly, in the adoption of value

orientation as the unit of analysis; and secondly, in the dynamic nature of the analytical approach which explored the interrelatedness between structure, agent and agency. This analysis has identified a paradox whereby entrepreneurs who lack green value orientations are nevertheless performing green actions and thus perpetuating the green socio-political context. Another contribution of this research lies in its thesis that the increasing emphasis in the recycling industry is a social construction of reality, but one given an objective nature attached to the language of 'green'. This is intensified by the entrepreneurs' articulation of their reality. Thus, as well as its contribution to both entrepreneurship and recycling literatures, the study provides an informed platform for policy makers and practitioners.

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List of Abbreviations

BEP-NE	Business Environment Partnership-North East
BREW	Business Resource Efficiency and Waste Programme
BMSW	Business Municipal Solid Waste
CA	Civic Amenity
COSLA	Convention of Scottish Local Authorities
CRNs	Community Recycling Networks
CWS	Community Waste Sector
DEFRA	Department of Environment, Food and Rural Affairs
DETR	Department of the Environment, Transport and the Regions
DoE	Department of Environment
EEA	European Environmental Agency
ELVs	End-of-Life-Vehicles
EPA	Environmental Protection Act
EVO	Entrepreneurial Value Orientation
FVO	Financial Value Orientation
GDP	Gross Domestic Product
GVA	Gross Value Added
GVO	Green Value Orientation
IWMCs	Integrated Waste Management Companies
LATS	Landfill Allowance Trading Scheme
LTCS	Landfill Tax Credit Scheme
MRF	Materials Recycling Facility
MSW	Municipal Solid Waste
NES	North East of Scotland
PFI	Private Finance Initiative
SEPA	Scottish Environmental Protection Agency
SME	Small and Medium Enterprise
SVO	Social Value Orientation
the context	The context in which the recycling industry operates
WIDP	Waste Infrastructure Delivery Programme
WIP	Waste Implementation Programme
WRAP	Waste and Resources Action Programme
WS2000	Waste Strategy 2000
WS2007	Waste Strategy 2007

CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This study aims to bring together two disparate academic fields of inquiry, namely recycling and entrepreneurship. The recycling industry is an industry which is growing in importance. Whilst the wide spectrum of public seminars, forums, institutional and policy initiatives spells out this importance, the recycling literature does not provide any overview, suggestion or indication of the industry's position. In a similar manner, the entrepreneurship literature provides very limited insights into the phenomenon of entrepreneurship in the recycling industry. This scenario seems to suggest that whilst there is a growing interest in the recycling industry from the policy context (DETR, 2000; DEFRA, 2006; DEFRA, 2007) the academic context has given inadequate attention to the exploration of the entrepreneurship phenomenon in the recycling industry. If academics are to stimulate development of the industry, there must be theory-practice integration. The focus of this research is thus driven by a desire to conceptualise a synergy between what is really going on in the recycling industry and insights from contemporary entrepreneurship literature.

The purpose of this Chapter is to articulate a holistic picture of this study founded on the research problematic introduced above. Section 1.2 introduces a background of the recycling landscape as it relates to the policy context. The Section closes with emphasis on the conduciveness of the policy context for entrepreneurial opportunities. Thereafter, Section 1.3 proceeds with a justification for the choice of North East Scotland as the empirical context for the study. It provides two practical rationales for this decision, a basic profile of regional characteristics as an introduction to the empirical context for the study. Finally, Section 1.4 presents the structure of the thesis.

1.2 Background to the Study

Over the past three decades, the environment has become a popular issue in social and political debates. Read (1999) noted that '*never before in*

human history have environmental problems been such a central source of popular and scholarly concern' (p. 261). Recycling is one of the domains which have evolved. It started as merely the removal of municipal waste but is currently accepted as a sustainable approach to solid waste management (Kaseva and Gupta, 1996). We have witnessed expansion in the volume of recyclable materials, the range of waste stream that can be recycled, reprocessing activities and participation in both developed (Alter, 1997; Clarke and Maantay, 2006) and developing countries (Medina, 2000; Fahmi, 2005). Furthermore, the recycling industry has become more than a public sector concern. It also comprises private (Kassim and Ali, 2006; Keremane and Mckay, 2009), social (Sharp and Luckin, 2006; Papaoikonomou *et al.*, 2009), public (Joos *et al.*, 1999) and informal sectors (Agarwal *et al.*, 2005; Wilson *et al.*, 2009).

According to Read (1999) local recycling practices were developed in response to concerns *inter alia* landfill, the relative costs of municipal solid waste management options and historical trends in the management of waste. Thus, political action played a crucial role in the growth and emphasis of recycling as a means of overcoming waste disposal challenges and increasing landfill diversion. In turn, it may shape cultural meaning systems and important socio-economic processes and outcomes such as industry emergence (Lounsbury *et al.*, 2003).

The purpose of this Section is to examine the political shifts and corresponding policy frameworks resulting from socio-economic changes, which facilitated and shaped the emergence and development of the recycling industry.

1.2.1 The Recycling Landscape: Pre-EU Landfill Directive

The earlier scenario refers to the initial stages of the industry's development, when it has not yet assumed the role, emphasis and recognition it currently has. Attention is brought to the impact of economic and social pressures and the role of policy in the creation of market opportunities in the recycling industry is emphasised.

The UK Government's attempts to develop a centrally guided policy aimed at increasing levels of recycling and reducing waste have been traced by Cooper and Cornwall (2007) to as far back as the Second World War, when the UK Government exercised compulsion to increase local authority salvage. However, attempts became more evident during the post-war period. Dramatic increases in the production of waste and the volume of many waste streams followed unprecedented global levels of economic activity. This brought about a corresponding increase in the cost and logistical difficulties of municipal waste management (Gandy, 1993). These together with public environmental concerns associated with the production of leachates and combustible landfill gas from the use of landfill as a disposal option (Gandy, 1993) and public health fears associated with rapid industrialisation and urbanisation (Evans, 1991; Melosi, 1981) increased the pressure on Government. This indirectly led to the demunicipalisation of municipal waste management. That is to say the use of private sector companies for the collection of waste on a contractual basis on behalf of the local Government in the 1970s. This was extended to the disposal of waste in the early 1980s (Gandy, 1993).

Gandy (1993) attributes the increasing private sector role in waste management to three main reasons. Firstly, the decline in the operational role of the municipal waste sector and the increased use of private contractors meant that new administrative structures were required to handle new demands in resource recovery, policy development and economies of scale (Stewart and Stoker, 1989; Goddard, 1975). Furthermore, there was a tendency for the public collection agency operating within the boundaries of limited tax revenues to be less cost and efficiency conscious (Goddard, 1975). Secondly, new market opportunities arose following the rising cost and technical complexity of municipal waste management. The cost of municipal waste management was found to be significantly reduced via joint ventures with private contractors (DoE, 1981) and even more so when both collection and disposal was contracted (Coopers and Lybrand, 1981). Thirdly, there was an ideological shift in public policy towards the active encouragement of the private sector role in waste management as a corollary of wider shifts towards neo-liberal policy

making during this period. The increase in public environmental concern has also been said to encourage stiffer national regulations for waste control (Financial Times Survey, 1990), which resulted in sectoral restructuring in response to the growing value of the market for handling municipal waste.

1.2.2 The Recycling Landscape: Post- EU Landfill Directive

During this period, major developments can be seen in the recycling industry following the influence of worldwide land filling concerns, which were translated into various forms of European legislation (Read, 1999) and consequently adopted into UK waste management policy.

The most influential waste management legislation is the European Landfill Directive 99/31/EC which was agreed in April 1999. The EU Landfill Directive calls for a reduction in the amount of biodegradable municipal solid waste disposed of to landfill. The Directive draws attention to deprioritise current practices and to reduce dependence on landfill (Read, 2001). Its overall aim is to prevent or minimise any negative impacts on human health or the environment due to the land filling of waste (Burnley, 2001). There are two main strategies for landfill diversion, *viz.* high material recovery combined with incineration and material recovery which includes recycling, composting and mechanical biological treatment (EEA, 2007). The Directive featured new waste recycling and recovery targets which will have to be ultimately met. Landfill must be progressively reduced to just one-third of its 1995 quantity by 2020. Article 5 requires a reduction in biodegradable municipal waste land filling to 75%, 50% and 35% of the baseline figures within 5, 8 and 15 years, respectively (Official Journal, 1999). Recycling of municipal solid waste (MSW), a priority in the EU waste hierarchy, is considered the “most environmentally sound” strategy following the preventive strategies of source reduction and reuse (EPA, 1990).

Two major outcomes emerged from this policy intervention. Firstly, the onus was on local authorities to implement strategies to achieve recycling targets (Ham *et al.*, 1994; Price, 2001; Mazzanti, 2009). These included a number of measures encompassing both penalties and incentives (Wilson,

1996). Penalties such as landfill levy increased diversion because they internalised the external costs of landfill (DoE, 1993). On the other hand, incentives were considered necessary because material recycling required vertical coordination from all stakeholder groups. The commercial sector is less likely to take environmental and social costs into account unless it receives some financial benefit for doing so (Singer, 1995). Other examples include recycling targets for local authorities, targets for recovery, the Waste and Resources Action Programme (WRAP), Landfill Tax Credit Scheme (LTCS) and review, Household Waste Recycling Act, recycling credits and review, Landfill Allowance Trading Scheme (LATS) and funding.

Secondly, the strategies gave rise to fiscal implications and created structural changes conducive for the development of the recycling industry. The collection and disposal of waste via joint ventures between the public and private sectors pre-EU Landfill Directive marked the beginnings of the recycling industry. However, it is in the latter scenario that the industry developed from mere collection and disposal to a full-fledged recycling and reclamation industry. Through Government funding and a developing national culture that welcomes, promotes and participates in recycling, new directions for growth in the industry emerged. This created a new scope for market opportunities to be tapped. In the next sub-section, the roots of the UK policy context and the structural outcomes following the delivery of national policies are discussed.

1.2.2.1 UK Waste Management Policy Context

The EU Landfill Directive made compulsory its incorporation into the national law of each EU member state by July 2001. It ordained that the business municipal waste targets (BMSW) must comply with this requirement within 5-9 years of this date (Burnley, 2001) and failure to comply may result in legal action by the EU (Price, 2001). This brought extreme pressure to bear on the UK in several respects. Solid waste generation was in a crisis (Holmes, 1996). With approximately 85% of MSW disposed to landfill (DoE, 1992; DoE, 1998), and landfill sites in the UK limited and reducing fast in size and number (Read, 1997), there was a real threat of reducing landfill to 59% of current capacity by the year 2010

(Read *et al.*, 1996). Adding to that, Burnley *et al.* (1999)'s modelling exercise suggested that the UK would have to divert some 15 million tonnes per year of waste from landfill which would involve introducing intensive household waste recycling schemes throughout the UK and constructing up to 46 new MSW incinerators. This was based on the conservative assumption that there would be no growth in MSW production over the next 20 years.

There was therefore a need to push the management of waste in the UK further up the hierarchy towards recovery/recycling and reuse and, at the top, reduction (Read, 1997). These resulted in efforts to seek alternative disposal options. The next Sections present the pre-2000 strategies, Waste Strategy 2000 and the spatial implications therein.

Pre-2000 Strategies

There are three major issues noted in the pre-2000 strategies. First, the UK Government's recognition of the need for change as regards the disposal of waste by both industry and householders (DoE, 1992). The first element of Government support for recycling in the UK was the general recycling target of 50% of the recyclable element of the household dustbin in 'This Common Inheritance' (DoE, 1989). In 1990 a target to recycle 25% of household waste by the year 2000 (DoE, 1990) was imposed on local authorities. Later, 'Making Waste Work' (DoE, 1995) reinforced this situation by setting a number of targets (see Table 1.1) to act as motivational tools and policy goals for municipal solid waste (MSW) management in the UK (Read, 1999).

	To reduce the proportion of controlled waste going to landfill from 70 to 60% by 2005.
1.	
2.	To recover 40% of MSW waste by 2005.
3.	To recycle or compost 25% of household waste by the year 2000.
4.	40% of domestic properties with a garden to carry out home composting by the year 2000.
5.	All WDAs to cost and consider the potential for central composting schemes.
6.	Easily accessible recycling facilities for 80% of households by the year 2000.

Table 1.1: Targets for Municipal Solid Waste Management (Source: DoE, 1995)

The major issue was that landfill was identified as the least sustainable method in the waste management hierarchy of options, after reduction, reuse and recovery in line with the principle of sustainable development (DoE, 1992). Whilst 'This Common Inheritance' reaffirmed it, 'Making Waste Work' (DoE, 1995) focused on increasing the emphasis on the options towards the top of the waste hierarchy (Figure 1) through the setting of targets.

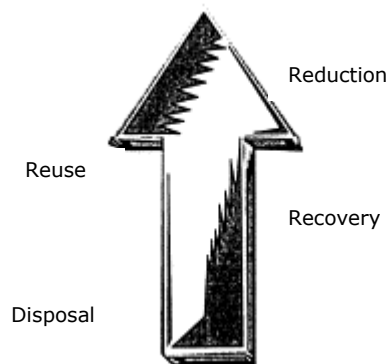


Figure 1.1: The Waste Management Hierarchy (Source: DoE, 1995)

'Making Waste Work' added emphasis on the fact that the hierarchy is a flexible tool (DoE, 1994) which appeared to be merely lip service and acknowledgment of supremacy rather than actual practice (Wilson, 1996).

The third issue relates to the introduction of landfill tax, the first 'green tax' in use in the UK (Read *et al.*, 1997). 'Making Waste Work' (DoE, 1995) introduced the Landfill Tax on the 1st October 1996 (HM Customs and Excise, 1996) as a fiscal measure to ensure that landfill waste disposal was more expensive than other waste management options and to account for the environmental costs associated with methane production and leachates. This resulted in a significant increase in the cost of disposing municipal solid waste in landfill (Morris, 1998; Morris, 2000). It also provided a new impetus for waste management in the UK (Read, 1999), and promoted a more sustainable approach to waste management (Grigg and Read, 2001).

However, these legislative emphases merely raised the profile of MSW and did not encourage the movement of its management up the hierarchy away from landfill. Strategies were criticised as unrealistic because of the limited available finances and infrastructure (Read, 1999). Furthermore, the 25% target officially applied to only a very specific portion of the waste stream i.e. household waste (Singer, 1995). The fact that the UK recovery rate for waste which was recycled, composed or incinerated with energy recovery reached 14% in 2000 (DETR, 2000) indicates that these targets made little impact (Price, 2001). Consequently, a Consultation Document 'Less Waste More Value' (DETR, 1998) was launched to review and revise national waste policy.

A revised National Waste Strategy 2000 (DETR, 2000) published in May 2000, recognised that many things needed to be achieved in a short period of time, indicating that previous Government policies (DoE 1995) had not worked (Read, 1999). Next, the later waste strategies which have arguably created more significant impacts on the waste management sector are presented.

WS2000 and Post-WS2000

The year 1999–2000 saw the publication of waste strategies for England and Wales (DETR, 2000), Scotland (SEPA, 1999) and Northern Ireland (DoE, 2000). These later strategies built on the earlier pre-2000 strategies (Tonglet *et al.*, 2004). Subsequently, Waste Strategy 2007 (DEFRA, 2007) builds upon Waste Strategy 2000 (DETR, 2000), addresses core issues such as the lack of emphasis on non-municipal waste, the introduction of statutory targets for business and consolidation of existing measures where it is deemed relevant.

Implicit to Waste Strategy for England and Wales 2000 (DETR, 2000) which was intended to implement the EU Landfill Directive (Burnley, 2001), is the waste hierarchy that was introduced in 'This Common Inheritance' and 'Making Waste Work'. However, WS2000 involved a radical shift from land filling to reduction, reuse and recycling (Barr, 2004). Existing targets were revised to be more challenging but realistic (Tonglet *et al.*, 2004; Tonglet *et*

al., 2004a) and local authorities were also faced with non-statutory targets which resulted in a competition between the waste sector and other local authority departments for available funds (Read, 2001).

Table 1.2 provides a summary of some key areas in the waste strategies for England, Wales, Scotland and Northern Ireland. To avoid confusion, it would be helpful to mention that the initial Waste Strategy for England and Wales 2000 was subsequently replaced by Waste Strategy for England 2000 (WS2000) when the National Waste Strategy for Wales was devolved to National Assembly for Wales.

Table 1.2: Some Useful Points about Waste Management in Wales, England, Scotland and Northern Ireland (Source: Extracted from Various Sources)

Wales	England	Scotland	Northern Ireland
Legislative Powers			
National Welsh Assembly	UK Government- DEFRA (England and Wales)	Scottish Executive (some by Westminster)	Environment and Heritage Services (EHS)
National Waste Strategy			
Wise About Waste, 2002, reviewed in 2007; Non-devolved policies and instruments are covered in WS2000.	Waste Strategy 2000 reviewed in 2006; Waste Strategy 2007.	National Waste Plan 2003; National Waste Management Plan 2008	Northern Ireland Waste Management Strategy, 2000, offers a long-term vision and a framework for this.
Landfill Allowances			
Landfill Allowances Scheme (Wales) Regulations enforced on 1 October 2004; No trading allowances; Biodegradable proportion for MSW is 61%; Fines for exceeding allowances are £200 per tonne.	Landfill Allowance Trading Scheme (England) enforced on 1 April 2005; There are trading allowances; Biodegradable proportion for MSW is 68%; Fines for exceeding allowances are £150 per tonne.	Landfill Allowance Trading Scheme (Scotland); Biodegradable proportion for MSW is 63%.	The Landfill (Scheme Year and Maximum Landfill Allowance) Regulations 2004 enforced on 22nd July 2004; Biodegradable proportion for municipal waste has been set as 71%.

Table 1.2: Some Useful Points about Waste Management in Wales, England, Scotland and Northern Ireland (Continued)

Wales	England	Scotland	Northern Ireland
Targets for Recycling and Composting			
<p>Non-statutory targets for municipal waste by 2003/04 achieve at least 15%; Recycling/composting of municipal waste with minimum of 5% composting and 5% recycling; By 2006/07 achieve at least 25% recycling/composting of municipal waste with a minimum of 10% composting and 10% recycling; By 2009/10 and beyond achieve at least 40% recycling/composting with a minimum of 15% composting and 15% recycling.</p>	<p>Under WS2000 statutory targets for household waste:</p> <ul style="list-style-type: none"> • to recycle or compost at least 17% (average) by 2003; • to recycle or compost at least 25% of household waste by 2005; • to recycle or compost at least 30% of household waste by 2010; • to recycle or compost at least 33% of household waste by 2015. <p>Under WS2007:</p> <ul style="list-style-type: none"> • 40% by 2010; • 45% by 2015; • 50% by 2020. 	<p>Under NWP 2003:</p> <ul style="list-style-type: none"> • 25% recycling/composting target by 2006 (not statutory); • 30% recycling and composting by 2008. <p>January 2008:</p> <ul style="list-style-type: none"> • 30% by 2008 (Exceeded: 32%); • 40% by 2010; • 50% by 2013; • 60% by 2020; • 70% by 2025 	<p>Targets for household waste:</p> <ul style="list-style-type: none"> • Recover 25% of household waste by 2005, of which at least 15% should be by recycling or composting; • Recover 40% of household waste by 2010, of which at least 25% shall be by recycling and composting.
Targets for Recovery of Municipal Waste			
<p>None</p>	<p>WS2000:</p> <ul style="list-style-type: none"> • to recover value from 40% of municipal waste by 2005; • to recover value from 45% of municipal waste by 2010; • to recover value from 67% of municipal waste by 2015. <p>WS2007:</p> <ul style="list-style-type: none"> • 53% by 2010; • 67% by 2015; • 75% by 2020 	<p>None</p>	<p>Biodegradable Municipal Waste:</p> <ul style="list-style-type: none"> • Reduce quantities being landfilled to 75% of the 1995 baseline levels by 2010, 50% by 2013 and 35% by 2020.
Improved Segregation of Hazardous Household Waste			
<p>By 2003/04 all civic amenity sites should have facilities to receive and store, prior to proper disposal, bonded asbestos sheets. All sites should also have facilities for receiving and storing, prior to recycling, oils, paints, solvents and fluorescent light bulbs.</p>	<p>None</p>	<p>Special Waste Regs came into force Aug 2004; Councils must amend licences by Dec 31 2004 for facilities for segregated storage of materials.</p>	<p>The Hazardous Waste Forum was set up in 2003. The Special Waste Regulations (NI) 1998 came into operation in September 1998. EHS administer and control an assignment note system requiring a unique code for each particular movement of special waste. This is designed as a system of control for dangerous and difficult to control wastes.</p>

Table 1.2: Some Useful Points about Waste Management in Wales, England, Scotland and Northern Ireland (Continued)

Wales	England	Scotland	Northern Ireland
Improved Segregation of Hazardous Household Waste			
By 2003/04 all civic amenity sites should have facilities to receive and store, prior to proper disposal, bonded asbestos sheets. All sites should also have facilities for receiving and storing, prior to recycling, oils, paints, solvents and fluorescent light bulbs.	None	Special Waste Regs came into force Aug 2004; Councils must amend licences by Dec 31 2004 for facilities for segregated storage of materials.	The Hazardous Waste Forum was set up in 2003. The Special Waste Regulations (NI) 1998 came into operation in September 1998. EHS administer and control an assignment note system requiring a unique code for each particular movement of special waste. This is designed as a system of control for dangerous and difficult to control wastes.
Stabilisation and Reduction of Household Waste			
By 2009/10 (and to apply beyond) waste arising per household should be no greater than those (for Wales) in 1997/98; By 2020 waste arisings per person should be less than 300kg per annum.	None	Stabilisation by 2010.	A secondary target is to stem the increase in waste arising per household, returning to 1998 levels by 2005 and thereafter reducing arising by 1% every three years.
Public Bodies to Reduce their Own Waste Arising			
By 2005, achieve a reduction in waste produced equivalent to at least 5% of the 1998 arising figure; by 2010, achieve a reduction in waste produced equivalent to at least 10% of the 1998 arising figure.	None	None	None
Additional Funding for Local Authorities			
Specific grant for sustainable waste management paid to each local authority (£93 million from 05/06 to 07/08; Landfill Tax "escalator" payments within RSG (£18 million from 05/06 to 07/08) 2007/08 - £35m.	Waste Performance and Efficiency Grant (WPEG) allocated to all authorities; Total sums of £105m in 2006/07 and £110m in 2007/08; Capital allowances for investment involving the use of secondary recovered fuel for combined heat and power facilities;	Strategic Waste Fund from Scottish Executive; Zero Waste Fund.	Waste Management Grant; Life Landfill Tax Credit Scheme.

Table 1.2: Some Useful Points about Waste Management in Wales, England, Scotland and Northern Ireland (Continued)

Wales	England	Scotland	Northern Ireland
Additional Funding for Local Authorities (Continued)			
	Over £300 million of Private Finance Initiative (PFI) investment made by DEFRA for three waste facilities; Waste Performance and Efficiency Grant (WPEG) allocated to all authorities; Total sums of £105m in 2006/07 and £110m in 2007/08.		
Recycling Credits			
Not paid in Wales as the WDA and WCA are combined in each Unitary Authority; Third party recycling payments are made (for example, to community sector groups).	Paid between WDAs and WCAs; Flexibility arrangements implemented in the Clean Neighbourhoods and Environment Act 2005 Amendment Regulations being laid to take effect on 1st April 2006.	Similar situation to Wales – no WDA or WCAs as all unitary authorities – no significant sums paid out to third parties either as yet.	None
Waste Education and Awareness Programme			
Waste Awareness Wales receiving £700k in core funding over 3 years; £1.5m allocated for a National media awareness campaign running from 04/05 to 06/07; Wales committed to the RecycleNow brand.	WRAP running RecycleNow! Waste awareness campaign in England.	SWAG (Scottish Waste Awareness Group) running national campaign and working with each local authority to deliver this at a local level also; RecycleNow not applicable in Scotland.	Wake up to Waste campaign was launched in February 2002. This is a multimedia campaign to raise awareness of waste issues and encourage public ownership of, and participation in sustainable waste management solutions.
Landfill Tax Credit Scheme (LTCS)			
Welsh Assembly Government (WAG) will spend its c.£5m p.a. on strategic projects to implement the Wales waste strategy (see 'Other initiatives' below).	LTCS funds in England split between WIP and WRAP.	LTCS funds used for environmental projects but since 2003 no longer used to directly fund waste management projects; Increase Fund from Scottish Executive has been released for funding community organisations for increased capacity for waste management and recycling in the community sector.	Landfill Tax Credit Scheme to be operated as a transitional scheme until the new scheme is introduced. This is proposed for 2005.

Table 1.2: Some Useful Points about Waste Management in Wales, England, Scotland and Northern Ireland (Continued)

Wales	England	Scotland	Northern Ireland
Other Guidance and Support to Local Authorities			
WAG funding a Welsh Local Government Association Peer Review initiative to review the performance of each local authority and identify and disseminate good practice.	WRAP running ROTATE; Other support from WIP.	Some WRAP projects also running in Scotland. REMADE Scotland also involved in a variety of research and analysis projects; Scottish Executive has a dedicated Waste Team.	Some WRAP projects also running in Northern Ireland; Other support from Full Circle and Investment Belfast.

End of Table 1.2

As shown in Table 1.2, a number of policy measures were introduced to address landfill diversion and implement EU Landfill Directive targets. All these measures have significantly impacted the areas of recycling and reuse (Sharp and Luckin, 2006). Targets, landfill allowances and the Household Recycling Act have resulted in an increased supply of recyclable materials and demand for recycling services; the Landfill Tax Credit Scheme (LTCS) and WRAP have supported third sector development in the industry. It is useful to mention that whilst Wales, Scotland and Northern Ireland each have their own national waste strategy, it is WS2000 which set the precedent for the development of these waste strategies and initiatives thereafter. Accordingly, the discussion on the spatial implications that follow is centred on WS2000.

Fiscal Implications

Government funding was exercised in order to uphold the changes proposed in WS2000 and develop the infrastructure to support national high-intensity recycling and composting schemes (Burnley, 2001). Additional funding for local authorities, including the private finance initiative, led to a major increase in kerbside recycling facilities and new waste treatment facilities. Furthermore, new institutional arrangements were established, aimed among other things at strengthening capacity and improving efficiency in local authorities, developing markets for waste materials and increasing

public awareness of waste. DEFRA's Waste Implementation Programme (WIP) helped local authorities to deliver the changes they needed to make, and to deliver the financing of infrastructure through Private Finance Initiative (PFI) or non-PFI and other financing channels. It also combined the DEFRA, WRAP and Environment Agency local authority support programmes, including home composting (DEFRA, 2006). Business Resource Efficiency and Waste (BREW) Programme supported some of the community sector initiatives such as Community Re-Paint Initiative, Fareshare's Food Programme and Scrapstores through the Business Re-Use Fund 2006/07.

Perhaps the most important initiative was the creation of WRAP following WS2000. WRAP has a role in developing the necessary markets to allow recycling and composting to thrive (Read, 2001). It looks into commercial, municipal and industrial wastes. Functions include market development issues that need to be addressed nationally and the facilitation of communication and dissemination of best practices amongst regional market development programmes (Watts *et al.*, 2001), the promotion of investment opportunities in the expansion of reprocessing, research project management, information management (a one-stop-shop); and the provision of advice, guidance and technical support on waste and resource related matters for businesses (Read, 2001), free support and advice to SMEs in the recycling and re-processing sector encompassing raising finance, market information, access to funding, opportunities for staff training, marketing and business planning (WRAP, 2009). It also works with Community Recycling Networks (CRNs) to manage third sector support in funding issues (WRAP, 2009).

Market development initiatives such as WRAP are crucial for various reasons. Statutory recycling targets will only be achieved if there are long-term sustainable markets for the materials recovered (Read, 2001). Furthermore, according to The White Paper: 'Our Competitive Future' (DTI, 1998), markets will only work when they are trusted by buyers and sellers. It also notes that technical standards accelerate the spread of best practice

and innovation through industry, especially to small businesses, and help to open markets in Europe and internationally (Watts *et al.*, 2001).

Socio-Cultural Implications

Targets, landfill allowances and the Household Recycling Act played a major role in behavioural and cultural changes in both public and householder domains. On the one hand, the Act influenced environmental awareness. Waste generation continues to place considerable demands on waste management, disposal facilities and the environment. One resulting effect is a culture which increasingly regards waste production as an anti-social activity rather than as the necessary and inevitable consequence of the demands of a consumer society (Gray, 1997); despite problems in getting participation such as logistical issues and economic deprivation (Martin *et al.*, 2006). The past decade has also witnessed various forms of public education (see Table 1.2). These range from road shows to the employment of recycling advisors to improve individual schemes. On the other hand, these measures also exerted cost pressures such as the escalating landfill tax and considerations of Pay-As-You-Throw scheme for householders (Price, 2001). Furthermore, the Government had sent a clear message to the landfill operators that recycling is a high priority and they should be looking to invest larger sums of money in this part of the waste management system (Read, 2001).

Public awareness of recycling has grown and is now greater than for any other environmental issue since WS2000 (DEFRA, 2006). This is in line with the desired outcomes to develop a culture that treats waste like a resource, that is fully aware of, and participates in waste prevention, re-use and recycling and extends practices beyond home to workplaces, shopping and leisure activities (DEFRA, 2007; DEFRA, 2006). This is already evident in the increasing participation in recycling (DEFRA, 2007). The past decade has also witnessed a number of Government initiatives ranging from efforts to make recycling a convenient practice, to linking the severity of the perceived waste problem with personal welfare in their efforts to create a recycling-oriented society (Barr, 2004). Further, it is hoped that businesses realise the opportunities associated with efficient and sustainable resource

management, treat their waste obligations as part of their core business, and exploit affordable services available to them (DEFRA, 2006).

Socio-Economic Implications

The development of initiatives to stimulate greater diversion of commercial and industrial wastes has provided access to greater tonnages of raw materials and stimulated local industries which can utilise the processed recycle.

In England, whilst a few larger organisations in the sector have developed as providers of mainstream waste management services for local authorities, the majority are small operations (DEFRA, 2006).

In Scotland, the solid waste management sector saw an increase in both the number of business units and their turnover since 1998, with the increase most pronounced from 2001. Increases in the overall numbers of businesses illustrate sectoral growth and can be indicative of existing business expansion. For the entire sector, enterprise numbers increased by around 50% from 1998 to 2004. Non-scrap recycling enterprise numbers have risen by over 40%, scrap recycling enterprise numbers have increased by 17% and collection and disposal enterprise numbers have risen by over 70%. Furthermore, GDP at basic prices reached £190 million in 2004 from £64.5 million in 1998. GDP at basic prices is lowest in non scrap recycling and highest in disposal. It was also reported that 4,500 new jobs were created in the sector. The average number of employees in recycling businesses has stayed stable, relative to the increase in the number of business units and jobs created in the overall waste management sector (REMADE, 2008).

WS 2000: Weaknesses and Way Forward

WS2000 and related strategies built on the pre-2000 strategies and marked the turning point for progress in the waste management sector. However, they have some weaknesses.

WS2000 focused on the EU Landfill Directive targets and covered only biodegradable municipal waste. Municipal solid waste includes household waste and any other waste collected by a Waste Collection Authority or its agents including municipal parks, beaches, commercial, office or industrial wastes and fly tipping, which is only a relatively small fraction i.e. under 10% of all wastes generated in England and Wales (DoE, 1995). The scenario is similar in Scotland. SEPA's official figures show that household waste only makes up around 13% of Scotland's controlled waste arising, which are dominated by construction and demolition wastes (48%) and commercial and industrial wastes (38%) (COSLA, 2009). WS2000 had no targets for non-municipal waste for beyond 2005 and there was no instrument comparable to LATS which drove action on non-municipal waste, even though there are several other measures which directly affected it.

Additionally, the penetration of waste services especially with regard to small and medium-sized businesses (SMEs) was still low (DEFRA, 2006a). This is despite the fact that SMEs represent a high proportion of UK businesses, have a key role in regional development (ECOTEC, 1997), have significant potential for secondary material usage, have the ability to innovate and achieve rapid technological development and flexibility in adapting to changing markets and other demands (Rowe and Hollinsworth, 1996) and are important to the success of market development initiatives geared towards ensuring a diversity of applications for recycled materials (Rowe and Enticott, 1998). Moreover, they produced about 40% of commercial and industrial waste in 2002/03 and there has been no significant change in this figure since then (DEFRA, 2006a).

Waste Strategy 2007 (WS2007) builds on the progress achieved by WS2000 in a similar way that WS2000 built on the pre-s2000 strategies. It also set the precedent for the development of waste strategies and initiatives in Wales, Scotland and Northern Ireland in the same way that WS2000 had done.

Two of WS2007's key objectives include: decouple waste growth (in all sectors) from economic growth and put more emphasis on waste prevention

and re-use; and increase diversion from landfill of non-municipal waste and secure better integration of treatment for municipal and non-municipal (business, construction, demolition, agriculture, fishing and forestry) waste (DEFRA, 2007). Further, it laid out a bolder and more vigorous vision to reduce reliance on landfill in two major ways. Firstly, it placed emphasis on stimulating investment in waste treatment and the corresponding treatment technology options for a given waste stream. Secondly, it introduced a new developing agenda which re-emphasised the role of local authorities which mandates their heavy involvement in business waste and to work closely with Regional Development Agencies via the development of the Waste Infrastructure Delivery Programme (WIDP) (DEFRA, 2007). WIDP aims to change local authorities from focusing almost exclusively on MSW to organisations that take a holistic view of the needs of waste treatment/processing in their given area by building upon the opportunities to achieve synergy between MSW and other waste treatment (Bates, 2008).

The emphasis on non-municipal waste in WS2007 is the most significant move forward from WS2000. Others include the zero waste growth aspirations currently pursued by England, Scotland, Wales and Northern Ireland; the use of third sector expertise, particularly to prevent waste, raise awareness, segregate waste at source and increase re-use and recycling of waste through capacity-building support; and the introduction of a new Waste Stakeholder Group to provide external advice, challenge and assist with the delivery of Waste Strategy 2007. Schemes for difficult to reach areas, employment of recycling advisors to intervene in areas of below average recycling performance and removal of the ban on introducing household financial incentives for waste reduction and recycling have also been considered (DEFRA, 2007).

In brief, WS2007 continues to build on the changing socio-cultural paradigm of a developing recycling society to stimulate further action by both individuals and businesses so that changed behaviour is embedded across all aspects of life. It therefore consolidates the earlier mentioned fiscal and socio-cultural implications.

1.2.3 Implications for Entrepreneurial Opportunities

Whilst there are criticisms about the earlier strategies (Read, 1999), one may argue that there was a progressive flow in the development of the industry. For example, the critique of limited finance and infrastructure as it relates to the Common Inheritance led to the delivery of WS2000 in these aspects which impacted the growth of the industry positively. Criticisms directed at the lack of emphasis on non-municipal solid waste led to these measures being incorporated in WS2007. Although it seems obvious that more significant impact and progress took place following WS2000 and one may argue that the 25% target for the year 2000 was not realistic, the pre-2000 strategies have contributed to cultural change in terms of spawning a society which regards recycling as an important practice.

Perhaps the core of the argument lies in the pressure on local authorities to achieve targets and the fact that 'increasing landfill costs is the most effective indirect means of stimulating recycling' (DoE, 1993). In England, recycling and composting of waste has nearly quadrupled since 1996-97, achieving 27% in 2005-06. The recycling of packaging waste has increased from 27% to 56% since 1998. Less waste is being landfilled, with a 9% fall between 2000-01 and 2004-05. Waste growth is also being reduced with municipal waste growing much less quickly than the economy at 0.5% per year. The landfill tax escalator and LATS have created sharp incentives to divert waste from landfill (DEFRA, 2006b). The pressure of targets on local authorities, the threat of rising disposal costs on companies and customers' generic environmental concerns (Thierry *et al.*, 1995) have all contributed to the earlier mentioned fiscal and socio-cultural implications. In turn, these have created environments conducive for entrepreneurial opportunities and venture creation (Gnyawali and Fogel, 1994).

Although research and conceptualisation about environments conducive for entrepreneurship are scarce (Begley *et al.*, 2005) (Wortman Jr., 1987), the literature provides some indicative guides to identify influencing factors. These include socio-cultural values (Begley and Wee-Liang Tan, 2001), perceived market opportunities and government involvement in the economy (Begley *et al.*, 2005). Perceived favourable conditions include high

demand for products or services the interested party plans to offer and the existence of many suppliers and few competitors (Davidsson, 1991; Porter, 1980). Research has shown that Government procurement programmes (Doutriaux, 1998) and business development assistance (Philips, 1993) can aid entrepreneurial efforts and increase the number of small firms in an economy (Spencer and Gómez, 2004). The UK policy framework for waste management in general and recycling in particular reflects these environments. For example, the fiscal decisions, infrastructure support, establishment of WRAP in England and REMADE in Scotland could all be considered as supportive entrepreneurial environments.

People are more likely to act when they perceive conditions as favourable objectively (Davidsson, 1991) and these environmental conditions have resulted in an increase in the supply of recyclables, an increase in the demand for recycling services and implies potential profitability. In 2006, it was estimated that the MSW stream (excluding commercial and industrial waste) utilised 55% of available Materials Recycling Facility (MRF) capacity. This could increase to around 70% in 2010 and nearly 100% in 2015 (WRAP, 2007). Overall, there has been a 16% increase in the amount of waste produced by the retail sector between 1998/9 and 2002/3 and an increase in reuse and recycling rates from 36% (1998/9) to 52% (2002/3) (DEFRA, 2007). On current estimates, England and Wales showed the need for around 700 new waste management facilities alone (DEFRA, 2006). Additionally, WS2007's emphasis on non-municipal waste (NMW) indicates additional tonnages from the commercial and industrial waste streams. The urban environment encompasses a wide range of retail activities producing a broad spectrum of waste and recyclate. Over 200,000 retailers operate within the UK contributing to 12% of all commercial and industrial waste produced (Envirowise, 2007).

The use of the ISO 14001 certification for environmental management practices also contributes to the emerging organisational culture values and efforts to enhance their environmental image. Organisations use the certification to increase internal efficiencies, create competitive advantage, opportunities and economic benefits (Coglianese and Nash, 2001) as well as

to strive for a socially responsible appearance (Darnall, 2006). Recycling practice forms a part of this evolving paradigm. Apart from cheaper disposal cost, it may also be used as a marketing tool to demonstrate a business' environmental performance and credentials. Although it appears relatively trivial compared to the targets and landfill tax, these too may have an impact on the forces of supply and demand.

Furthermore, there has been evidence of profitability in the history of businesses in the industry. In the US, firms such as Waste Management and Browning-Ferris came of age in the 1970s mainly in the business of collecting and hauling waste but grew through acquisition and increasingly got into landfill construction and ownership. By the 1980s, they were in the process of becoming a larger scale solid waste management conglomerates that offered a vertically integrated set of waste management solutions. They saw recycling as a natural extension of this vertical integration strategy. Recycling offered the promise of creating additional revenue out of the waste they already collected and transferred to landfills they owned (Lounsbury *et al.* 2003) and this would motivate entrepreneurs to seek opportunities (Vesper, 1990).

From another standpoint, the earlier years following demunicipalisation may imply that there were already entrepreneurial opportunities at that time. According to Read (1999), the use of private companies has been rapidly increasing in developed economies since the 1970s. However, new entrepreneurial landscapes have evolved following more concerted political impact and dynamic spatial changes in the post-EU Landfill Directive environment. The role of the private sector in the industry has increased in importance. Treatment and disposal facilities have been increasingly contracted out over the past two decades such that the industry has been increasing private and community waste sector operations. Across England and Wales, 48% of doorstep recycling services are provided 'in-house' by local authorities, 37% by private companies and 15% by the Community Waste Sector (CWS) (Sharp and Luckin, 2006). The pressure to respond to the demands of the EU Landfill Directive and lead the challenge to move away from the landfill as the predominant waste option is focused on

collectors and processors, not landfill operators who are merely recipients of waste generated by others (Joseph and Price, 1999). Local Governments either directly employ labour or use private sector companies (Price, 2001) on a contractual basis. There are various arguments to show that the private sector has played a significant role in the UK waste management industry (Reamer, 1999). These include lower prices, greater customer satisfaction, greater flexibility, greater reliability, fewer procedural constraints (Cointreau-Levine, 2000) and more innovation in service quality enhancement (Bel and Miralles, 2003).

Apart from the private sector, there is also the community waste sector (CWS). The CWS includes organisations, now represented by the Community Recycling Network (CRN), that pioneered kerbside collections, recycling, composting, waste education and the management of civic amenity (CA) sites and appears to have an important innovation function (Sharp and Luckin, 2006). It has been estimated that there were approximately 1,000 CWS organisations in date (Luckin and Sharp, 2003). CWS has a diverse range of organisations from informal and voluntary organisations to registered professional businesses. Thus, these organisations have differing sources and mixes of income, multiple activities and multiple objectives. The commonality between organisations may be that they engage in re-use and recycling activities in order to achieve wider social and environmental objectives, for example greater community cohesion, improving the local environment, or training and work integration opportunities (Luckin and Sharp, 2004). According to Murray (1999), community waste projects may become a significant part of the waste sector over the long term. This is a valid point as the CWS offers unique contributions which are not re-produced by the public and private sectors, and has been innovative in the type of service and manner in which it is provided (Sharp and Luckin, 2006). Furthermore, the Government has pledged to help social enterprises secure a larger share of local authority contract work and make greater use of third sector expertise to prevent waste, raise awareness, segregate waste at source and increase re-use and recycling of waste through capacity-building support (DEFRA, 2007). It should also be noted that while a few larger organisations in the sector have

developed as providers of mainstream waste management services for local authorities, the majority are small operations (DEFRA, 2006).

The need for, and growth of, private and community waste sectors bow to two crucial points. The first is the availability of entrepreneurial opportunities in both for-profit and not-for-profit sectors. The second is whether entrepreneurship may contribute significantly to actual waste minimisation and resource recovery; thus diversion from landfill. Although there is a wide range of literature in both the academic fields of recycling and entrepreneurship, little conceptualisation has been made about the entrepreneurship phenomenon in the recycling industry (see Chapter 2).

This study thus begins with an overarching research question: **'how well does entrepreneurship explain the recycling industry?'** The literature review in Chapter 2 will unpack this question and streamline a focus for the research issues to be explored. It will establish the gap in the literature pertaining to the recycling entrepreneur and positions him or her as the central figure in this study to understand the entrepreneurship phenomenon in the recycling industry. However, as Smith (2006) has discussed in length, the term 'entrepreneur' has been frequently 'contested' (Barry, 1999) with regards its definition, form and understanding. As an introductory Chapter, it is helpful to clarify the definition of the term as it has been used in this study.

1.3 The 'Entrepreneur' and the 'Recycling Entrepreneur'

The meaning and scope of the term 'entrepreneur' as it has been used in this study is outlined below:

- The historically central economic figure introduced by classical theorists (example: Cantillon, Say, Adam Smith, Kirzner, Casson), but also gives due regard to the behaviourists' (example: Weber, McClelland) perspectives of the term, as well as the contemporary views of social and green entrepreneur;
- Includes those individuals who exercise control over production not merely for personal consumption (McClelland, 1961) and thus not limiting the scope to owner managers or businessmen (Chell, 1994);

- Accepts the influence of economic rationalities (Zukin and DiMaggio, 1990) on entrepreneurial behaviour but recognises the impact of social structures on these rationalities (Anderson, 1995);
- Regards them as promoters of innovation (Schumpeter, 1934) and as agents of change (Chell, 1994) but their contribution is toward economic as well as social and environmental.

The above scope applied to the definition of entrepreneur may appear to be broad. But entrepreneurial practice as an art (Chell *et al*, 1991), is arguably difficult to explain in terms of origin, method or environment (Livesay, 1982). Further, if it is a practice (Drucker, 1985) and has no universal definition (Gartner, 1988; Chell, 1994; Barry, 1999), it seems rational not to disregard the developments to the definition especially in attempting to understand the entrepreneurship phenomenon in a unresearched arena like the recycling industry.

As a final point, the term 'recycling' refers broadly to the act of converting waste into useful material (Waite, 1995). The scope of the recycling industry within the context of this study is in accordance with this broad classification. It is the aggregate of all those units of recycling businesses which carry out all the phases involved in the waste conversion operations. Accordingly, the entrepreneur referred to for the purposes of this study is the recycling entrepreneur i.e. the individuals who develop strategies, manage, lead and run recycling businesses.

1.4 Empirical Context: The North East of Scotland

The North East of Scotland (NES), commonly known as Grampian and divided into the unitary council areas of Moray, Aberdeenshire and the City of Aberdeen, is selected as the research context to explore the entrepreneurship phenomenon in the recycling industry. The lack of research pertaining to the entrepreneurship phenomenon in the recycling industry may imply that a wide range of geographical areas are relevant as research context. However, the North East of Scotland was particularly relevant for this study due to two main reasons.

Firstly, the fieldwork for this study followed the collaboration with Business Environmental Partnership-North East (BEP-NE) (see Section 3.4 for details). In their primary role as Business and Environmental Advisers, the BEP-NE team has established relationships with a number of recycling businesses in the North East of Scotland. With this collaboration there was a good opportunity for access. This was helpful in overcoming the main challenges pertaining to access which include convincing individuals to participate in the study, building trust and credibility at the field site and getting people to respond (Creswell, 2007). It also increased the possibility of access to data for both context and process issues to address the nature of the inquiry which this study upholds (see Chapter 2). Thus, the North East of Scotland became an appropriate research context (Weis and Fine, 2000) to interrogate the issues identified since access was possible and the appropriate people were likely to be available (Berg, 2007).

Secondly, the researcher living in the region allowed her to be immersed in the local culture and closeness to the area. This provided opportunities to observe, record and triangulate emerging data (Jack, 2002) as well as stimulate comparative analysis of emerging material. To this end, it is worth mentioning that although the fieldwork was conducted formally over a period of three months, living in the region allowed the researcher to take evening or Sunday morning drives outside that period to some of the informants' sites. This was done not with any intention to gather specific information or to make specific observations. Rather, it was aimed at broadening and deepening awareness of the recycling businesses' scenes. Accordingly, the North East of Scotland was selected as the specific research context to understand the phenomenon of entrepreneurship in the recycling industry.

A preliminary introduction of the region is presented in the next subsection. It may be helpful to note that insights into the context in which the recycling industry operates using data collected from fieldwork is provided in depth in Chapter 4.

1.4.1 Geography

The North East of Scotland encompasses some 3,360 square miles and is bordered by 150 miles of coastline. The City of Aberdeen is the smallest amongst the unitary councils in the North East of Scotland. It occupies 186 square kilometres (0.24%) of Scotland's land area and mostly stands between the mouths of the rivers Dee and Don¹. Aberdeenshire surrounds the City of Aberdeen council and is the largest council area in the North East of Scotland. It occupies 6,313 square kilometres (4.62%) of Scotland's land area and is predominantly rural. The area varies from mountainous Cairngorms to rich agricultural lowlands and rugged coastline². Moray occupies 2,238 square kilometres (2.87%) of Scotland's land area, with coastline on the Moray Firth and borders the Aberdeenshire and Highland council areas³. The North East of Scotland (see Figure 1.2) is also one of the eleven waste strategy areas in Scotland.

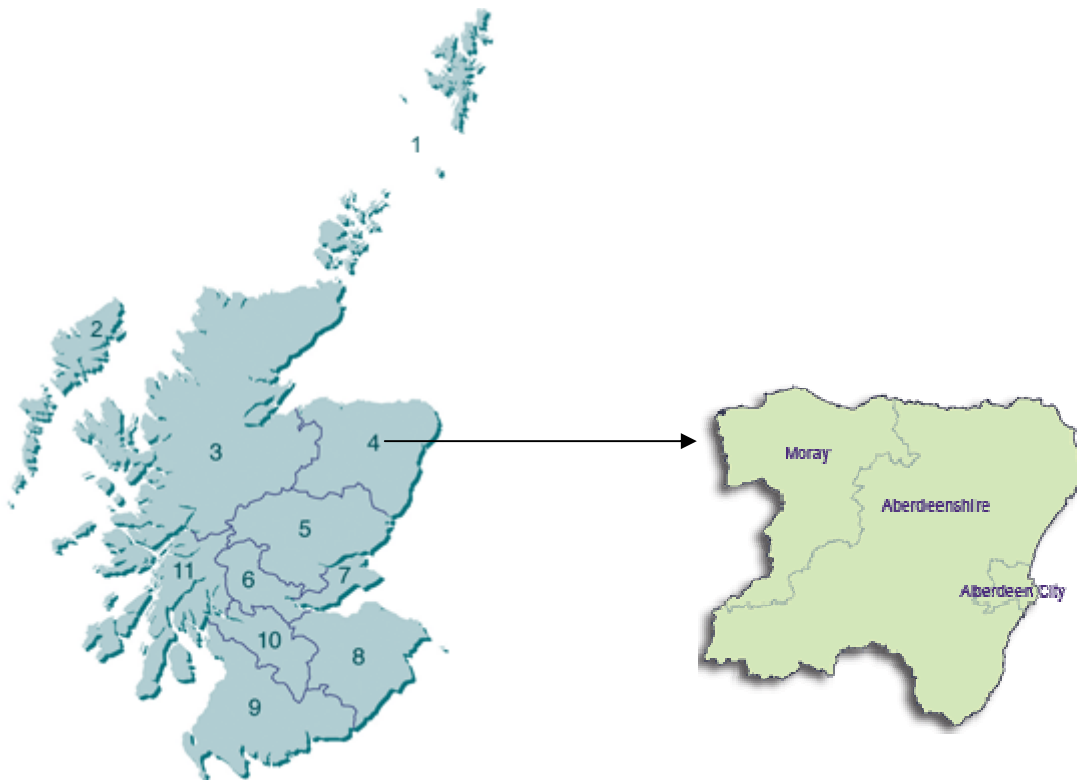


Figure 1.2: The North East of Scotland

¹ Available at <http://en.wikipedia.org/wiki/Aberdeen> on 16/01/10

² Available at <http://en.wikipedia.org/wiki/Aberdeenshire> on 16/01/10

³ Available at <http://en.wikipedia.org/wiki/Moray> on 16/01/10

1.4.2 Population

The city of Aberdeen is the third largest city in Scotland with a population of 202,370 and an average of 1,089 people per square kilometre. In Aberdeenshire, the estimated population is 37 persons per square kilometre, making a total of 235,440. Further, 2004 statistics show that the major towns are Peterhead (17,891), Fraserburgh (12,116), Inverurie (11,060), Stonehaven (10,974), Westhill (10,054) and Ellon (9,465). Moray's estimated population is 39 persons per square kilometre with an estimated total of 88,120. Based on 2001 statistics, the majority of its population is found in Elgin (20,829), followed by Forres (9,004). Table 1.3 summarises the land area and population density of the North East of Scotland in 30 June 2005.

	Estimated population 30 June 2005	As a % of Scotland's Population	Area¹ (sq km)	As a % of Scotland's Land Area	Persons² per Sq km
Council areas					
Aberdeen City	202,370	3.97%	186	0.24%	1,089
Aberdeenshire	235,440	4.62%	6,313	8.10%	37
Moray	88,120	1.72%	2,238	2.87%	39
Grampian (NES)	525,930	10.32%	8,737	11.21%	
Scotland	5,094,800		77,925		65

Table 1.3: Land Area and Population Density in 30 June 2005
(Source: Extracted from General Register Office, Scotland)

1.4.3 Economy, Industries and Enterprise Activities

Aberdeen City and Shire house over 18,000 businesses, representing 8.6% of the Scottish total. It makes a disproportionately positive contribution to Scotland's economic output generating 11.3% of total Gross Domestic Product (GDP). In terms of Gross Value Added (GVA) per capita, a measure of productivity, these unitary councils are well above the national average and third highest in the UK. Exports from the region account for 8.6% of

national export sales. Unemployment in the region stands at 1.6%, placing it amongst the lowest in the country with average earnings amongst the highest in the UK (Aberdeen Key Facts, 2008/09)⁴.

This region has long been known as good farming and fishing territory but has come into considerable wealth because of its location as a base for the North Sea offshore oil industry. Grampian is home to Scotland's globally competitive energy industry and has an international reputation as a leading technology location. The sustained success of the energy industry and its supply chain is shaped by the drive to maximise the opportunities in the North Sea and the long-term commercial imperative of seeking new markets. Other key growth industries are life sciences, tourism, and food and drink.

Grampian has a higher number of enterprises (12%) but lower employment (11%) compared to Glasgow (11% enterprises and 16% employment indicates that Grampian has a smaller average business size than Glasgow (Scottish Economics Statistics, 2006)⁵. Moray, Badenoch and Strathspey had an average business start-up rate of 3.1 per 1,000 populations in 2002, less than the average for the Highlands and Island Enterprise area and Scotland. Although a large percentage of employees (30.1%) work in companies with more than 100 employees, a larger percentage (59.5%) work in firms with 49 or fewer employees, highlighting the dominance of small firms in the area. Table 1.4 summarises the operating plan for Grampian for 2005-2006.

⁴ 'Behind the Granite: Aberdeen Keyfacts 2008/09', Available online at http://www.aberdeencity.gov.uk/statistics/stt/stt_home.asp on 16/01/10

⁵ Available online at <http://www.culturalcommission.co.uk/Resource/Doc/156122/0041889.pdf> on 16/01/10

	Growing Businesses	Skills and Learning	Global Connections
Our Focus	<ul style="list-style-type: none"> ➤ Grow businesses of scale; ➤ Support innovation; ➤ Promote growth in key industries; ➤ Encourage and facilitate a culture of enterprise; ➤ Promote leadership and workforce development as key to growth. 	<ul style="list-style-type: none"> ➤ Build on advantages of buoyant labour market; ➤ Match training with business needs; ➤ Offer best start for young people; ➤ Address obstacles to employment. 	<ul style="list-style-type: none"> ➤ Support businesses to operate and grow internationally; ➤ Increase inward investment to the region; ➤ Promote region as base for global business; ➤ Enhance connectivity - air, sea, rail and road.
Key activities	<ul style="list-style-type: none"> ➤ Business development assistance for growth businesses; ➤ Lean Management Programme; ➤ Marketing Advance Programme; ➤ Access to financial support; ➤ Innovation and R&D grants; ➤ Increase start-ups via Business Gateway; ➤ Aftercare support to maintain high survival rate; ➤ Investors in People. 	<ul style="list-style-type: none"> ➤ Developing local labour market intelligence; ➤ Key sector recruitment initiatives; ➤ Skill seekers; ➤ Modern Apprenticeships; ➤ Get Ready for Work; ➤ Training for Work. 	<ul style="list-style-type: none"> ➤ Internationalisation support and funding; ➤ Global Companies Programme; ➤ Inward Investment campaign; ➤ Development of regional identity; ➤ Technology Parks development; ➤ City Vision project; ➤ Cairngorms National Park; ➤ Life sciences incubator; ➤ NESTRANS.
Annual measures of progress	<ul style="list-style-type: none"> ➤ 45 – 50 growth businesses improving performance; ➤ 46 – 50 businesses showing additional growth via innovation; ➤ 940 – 950 business start-ups; ➤ Three-year survival rate of between 70% and 80%; ➤ 200 – 250 workforce development engagements; ➤ 35-45 businesses achieving IiP first-time recognition against the standard ➤ 	<ul style="list-style-type: none"> ➤ Improved access to labour market intelligence for employers and workforce; ➤ 780 – 850 young people achieve in vocational training; ➤ 300 – 320 Modern Apprenticeships (non-adult) achieved ➤ 130 – 150 Get Ready for Work progressions ➤ 120 – 130 adult Training for Work participants move into employment 	<ul style="list-style-type: none"> ➤ 81 – 86 growth businesses supported to participate internationally; ➤ 2,500 – 2,750 sq m of accommodation for high-impact projects.
Annual measures of progress	£9.965 M	£4.639 M	£6.827 M
Network support	£2.138 M		

Table 1.4: Operating Plan for Grampian (2005-2006)
(Source: Scottish Enterprise Grampian- Operating Plan Summary 2005-2006)

The next Section presents an overview of the thesis and provides a diagrammatic illustration of the structure of the research to demonstrate the links between the Chapters.

1.5 Structure of the Thesis

This first Chapter has introduced the study. It has provided a detailed description of the UK Waste Management Policy context and demonstrated its conduciveness for different forms of entrepreneurial opportunities. In line with that, the overarching research question for this study, 'how well does entrepreneurship explain the recycling industry?' has been raised. It has also introduced the North East of Scotland as the empirical context for this study. Figure 1.3 illustrates the structure of the thesis and highlights of each Chapter. This is followed by an outline of the remaining Chapters.

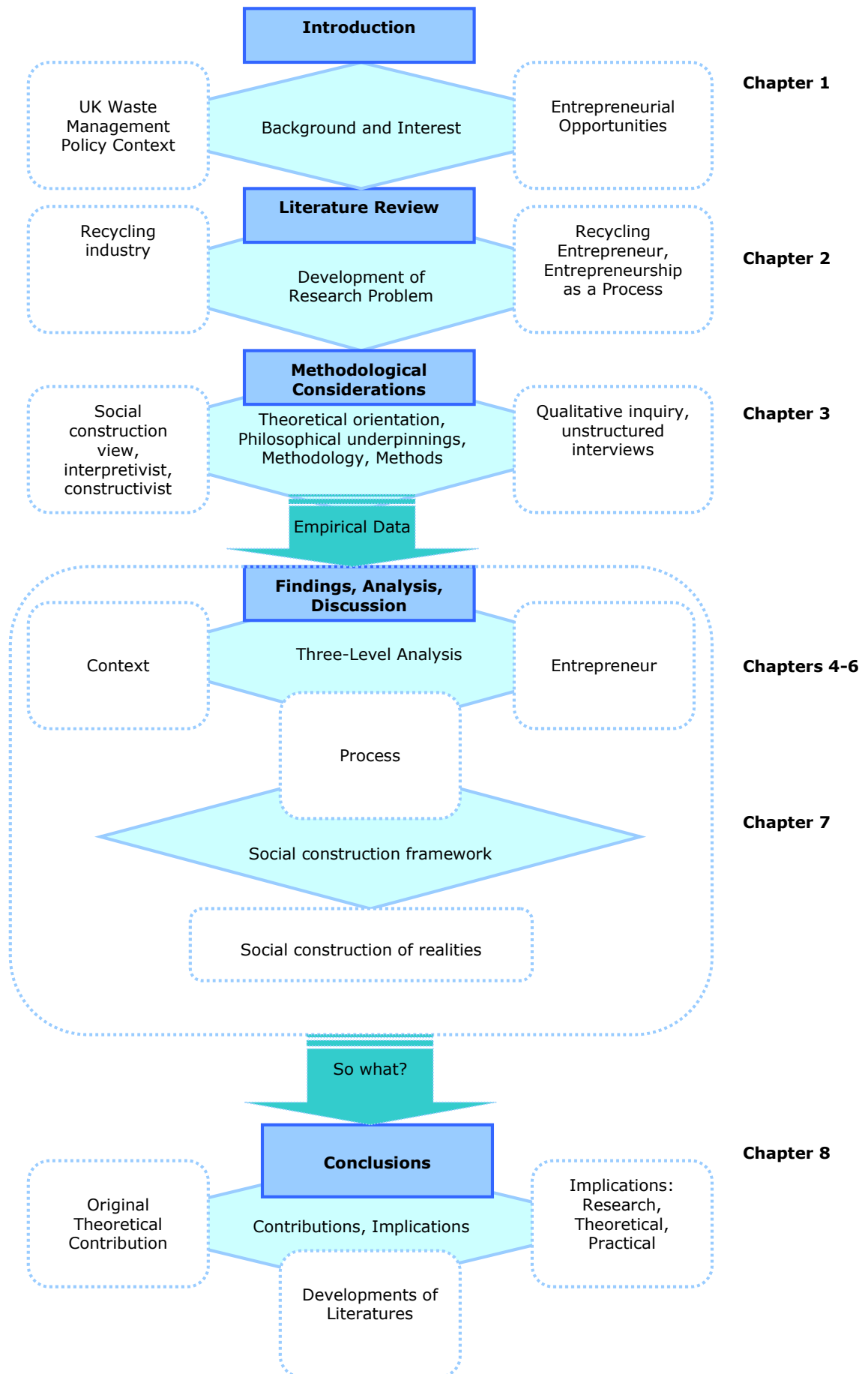


Figure 1.3: Structure of the Thesis

Chapter 2 situates the research problem with a review of the extant literatures in recycling and entrepreneurship. As the broad aim of the thesis is to integrate the academic fields of recycling and entrepreneurship, it begins by providing a background of both fields and the literatures which integrate them. The lack of examination of the recycling entrepreneur is highlighted and a review of literatures pertaining to the different notions of entrepreneurship and perspectives in understanding entrepreneurship have helped to develop the research problem and refine the overarching research question.

Chapter 3 deals with the methodological considerations of the study. The nature of the research problem is laid out and a social construction view is argued as the appropriate theoretical orientation for this study. This is followed by an in-depth review of theoretical underpinnings which argues for an interpretivist ontology and constructivist epistemology stances. Accordingly, a case for qualitative inquiry is made, and the research design, research methods employed including sampling and demographics approach are discussed.

Chapters 4, 5 and 6 provide the analysis of the empirical data at the context, agent and process levels respectively. In Chapter 4, insights into the nature of the recycling industry are provided at three stages. The first stage gives a broad understanding of the recycling industry. At the second stage, the environmental context is described as composed of analytically different elements namely social, political and economic strands. With elements of each of these individual strands in place, the interplay between strands which produces the culture in the environmental context is then explored. The third stage draws on basic descriptive statistical findings of the study to show how strands and culture become articulated within the particularities of the North East of Scotland and consequently create the context in which the recycling industry operates.

Chapter 5 provides a descriptive account of the recycling entrepreneur's opportunity construction and addresses the basic question of 'what is really going on?' The first part concentrates on the development of an organising

framework which forms the basis of progressive focusing for the continuing analysis. The derivation of the primary categories based on the recycling entrepreneur's value orientation is detailed. Finally, the hybrids and change of value orientation over time is brought to the readers' attention.

Chapter 6 focuses on the process-level analysis. The analysis involves three stages of the interactive processes between the entrepreneur and context, followed by the value outputs. The first stage explores the interactive processes between the entrepreneur (as agent) with the context (structure) in order to understand the foundations of entrepreneurial agency. The second stage analyses the interactive process between entrepreneurial agency and the structure, and explores the opportunity construction. The third stage proceeds to analyse the enactment stage comprising the interactive processes between entrepreneurial agency in action and structure. Thereafter, the core forms of value output are explored and the paradox that majority recycling entrepreneurs do not possess green value orientation but nevertheless contribute to the creation of overarching green values in the structure is highlighted.

Chapter 7 draws on the apparent paradox of the overarching green values created and reflected in a consolidated green structure presented in Chapter 6. Using a social construction framework, the Chapter transcends a higher level of analysis to provide an explanation of the transformative processes and increasing interest in the recycling industry from an entrepreneurship perspective.

Chapter 8 re-visits the research question 'how well does entrepreneurship explain the recycling industry?' It highlights the key findings of the research and discusses its original theoretical contribution, developments of the literatures, research, theoretical and practical implications. It also provides some suggestions for further research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Chapter 1 has presented the background for the study and drew attention to the implications of the UK Waste Management Policy Context on entrepreneurial opportunities. It has also raised an overarching research question for the study *viz.* 'how well does entrepreneurship explain the recycling industry?' However, there is a lack of conceptualisation in this area. The purpose of this Chapter is therefore to present a literature review for recycling and entrepreneurship, and to generate sub-research questions for the study.

Section 2.2 provides a background of the recycling literature. An overview of the main themes in the field is provided and the scope of the 'recycling industry' covered in the extant recycling literature is highlighted. Section 2.3 provides the background of the entrepreneurship literature. An overview of the development and scope of the entrepreneurship literature is presented. Section 2.4 reviews the state of integration between both the academic fields. It begins with a critique of recycling literatures which appears to be integrated with entrepreneurship. This is followed by a review of entrepreneurship literatures which have integrated recycling. The gap in knowledge concerning the recycling entrepreneur is highlighted. Consequently, Section 2.5 brings together the existing literatures to streamline a focus to understand the recycling entrepreneur. The Section begins with the different strands in entrepreneurship research and argues that the recycling entrepreneur needs to be studied as an individual strand in itself. It then proceeds to consider a suitable approach to understand the recycling entrepreneur and argues that the key to understanding the entrepreneur is to study entrepreneurship as a process. Section 2.6 ends the Chapter with the research questions generated from the literature review.

2.2 Background of the Recycling Literature

Gandy (1993) stated that the study of waste management is a neglected area within the social sciences although it has been extensively examined within other disciplines particularly engineering. An overview of the recycling literature reveals a match with Gandy's observation. Most of the studies are material specific and cover a wide range of waste streams from paper to plastics, electronics, tyres, metals, bio fuels, batteries and other hazardous wastes. Quite often these studies are conducted within a specific regional setting for a specified material stream. Although they might be conducted within the context of municipal solid waste or non-municipal solid waste, emphasis is usually placed on the technical and technological aspects of recycling. These issues do not have any direct nor indirect association with the research interest of this study which is the nature of the recycling industry as it relates to the entrepreneurship phenomenon.

An overview of the literature also reveals that since the late 1980s and early 1990s, scholars in this field appear to give greater attention to other aspects (see Table 2.1). A straightforward search via the Web of Knowledge or key academic journals in recycling (examples: Resources, Conservation and Recycling, Waste Management Research, Waste Management) for example, identified public policy and social science aspects as emergent interests since that period. The themes revolve around behavioural, cultural, participative or educational, schemes and strategies. These studies appear to have an association with the increasing emphasis in recycling namely as individual, organisational, public practices; and as an industry. Furthermore, they may assist in an understanding of the emergence and development of the recycling industry. For example, they often concern the supply of recyclable materials and demand for recycling services. The scope covered by these studies and some examples are summarised and tabulated in Table 2.1. Both the list and examples are neither conclusive nor exhaustive. The objectives of the summary are to show the development of the scope in this area of the literature in a comprehensive manner and to serve as convenient points of reference. This approach in presentation is appropriate because a critique on the existing literature on recycling would

not help in understanding the nature of the recycling industry from an entrepreneurship perspective.

Scope	Theme(s) included:	Example(s) of studies
Schemes	Management of recycling schemes, promotional and marketing strategies.	Ball (1990); Gilnreiner (1994) ; Thomas(1999); Li <i>et al.</i> (2003).
Policies	Waste management policies, municipal waste policies, policy barriers, role of local authority; technical and economic appraisals of policies.	Barton (1991); Macdonald and Vopni (1994); Goddard (1995); Read (1999).
Participation	Public participation; household and kerbside recycling behaviour; Social, psychological factors; attitude, motivations, increasing awareness and education; socio-cultural issues.	Deyle and Schade (1991); Ball and Tavitian (1992); McCarthy (1993); Muttamara <i>et al.</i> (1994); Macdonald and Vopni (1994); Dennison <i>et al.</i> (1996); Rhyner (1998); McDonald and Ball (1998); Evison and Read (2001); Thomas(2001); Worrell (2003); McDonald and Oates (2003); Grodzinska-Jurczak <i>et al.</i> (2003); Tonglet <i>et al.</i> (2004); Mee <i>et al.</i> (2004); Woodard <i>et al.</i> (2004); Martin <i>et al.</i> (2006); Refsgaard and Magnussen (2009); Hage, <i>et al.</i> (2009).
Sustainability	Environmental practices, waste minimisation, resource efficiency, waste management practices, landfill, waste disposal issues, relationship with sustainability.	Barr <i>et al.</i> (2010); Ackroyd <i>et al.</i> (2006); Akroyd (2008); Afon (2007); Verbruggen (2009).

Table 2.1: Recycling Literature: Trends in Policy and Social Science Aspects

From another perspective, recycling is a sub-category of waste management. Thus, quite often, recycling appears as one of the components examined in studies of waste management and not the central subject. It may be incorporated in a larger study:

- On broader environmental issues (Mathews and Goldsztein, 2009)
- On broader waste treatment and resource recovery issues (Buekens, 1978);
- Coupled with other waste management issues (Gilnreiner, 1994);

- Aimed at improving waste management policy formulation, translation and imposition (Read, 1999);
- To provide more complete evidence on waste generation and disposal for delinking and decoupling analysis (Mazzanti and Zoboli, 2008);
- To fulfil analysis of economic and environmental benefits and costs of different disposal options (Dijkgraaf and Vollebergh, 2004).

It may also be worthwhile to mention that whilst recycling is a form of waste minimisation, not all waste minimisation practices refer to recycling. Also, factors affecting recycling behaviour are different from waste minimisation (Barr, 2001). Hence, the literature on waste minimisation is treated as a separate body of literature for the purposes of this study.

Having presented a broad overview of the scope of the recycling literature, attention is now brought to the topic 'recycling industry', whose increasing interest is the main thrust for this study. It must be noted that the term 'recycling industry' within the context of this study refers to the industry of recycling the wide array of waste material streams. In other words, it is composed of many sub-industries including paper, metal, wood, plastic, aluminium; indicating a heterogeneous nature. Conversely, the term is often used in the literature to refer to a specific material stream for an individual study. Some examples include the technological aspects and technical processes involved in the paper recycling industry (Lodeni *et al.* 2009), the automobile recycling industry in the United States (Das *et al.* 1995), the plastics recycling industry in Germany (Patel *et al.* 2000), the Finnish paper recycling industry (Lodeni *et al.* 2009) and the bio-fuel industry in Argentina (Mathews and Goldsztein, 2009). The municipal household waste stream, previously neglected in waste management research (Gandy, 1993), became the focus of studies on recycling in the 1990s. Conversely, interest in business solid waste (which was strong in the early 1990s) seems to be waning. Scholarly interest in recycling has obviously increased since the year 2000. However, the popular themes revolved around policy issues, recycling programs and participation (see Table 2.1) and have not considered recycling businesses as businesses.

The above paragraph has stressed the generic way in which the 'recycling industry' has been studied within the academic field of recycling. Some scholars focused on specific sectors within the recycling industry. Sharp and Luckin (2006) for example, provide some insights into the community waste sector in the industry, particularly its contribution to waste services compared to its commercial and state competitors. Although their research is useful to the study of the recycling industry, they did not discuss the entrepreneurship phenomenon or related issues. Studies which explore the private sector in the recycling industry are rare when compare to those that examine the informal waste sector. Likewise Sharp and Luckin (2006), the studies that examine the informal waste sector provide some insights into the recycling industry. However, they do not shed light on the main research question of this study. This may be explained by the fact that the informal waste sector has a different nature from the other sectors. The informal waste sector literature is largely concerned with the livelihood and welfare of garbage recyclers rather than the entrepreneurship aspects and the sector's impact on the economic and environmental contexts (see Section 2.4.1). As such, they do not expound the context of entrepreneurship. The thrust of this study lies in understanding the changing social and entrepreneurial landscapes that has evolved between the times when the recycling industry was mainly the interest of garbage recyclers carrying out waste-picking and scavenging activities to the current situation where recycling is an international, local, political, organisational, public and individual concerns.

There are other ways in which the recycling industry has been explored but they too are equally not associated with the phenomenon of entrepreneurship. Lang *et al.* (2006) for example, studied a unique aspect of the recycling industry: the significance of local participatory mechanisms in restructuring solid-waste collection and developing the recycling industry whilst putting vacant and under-used areas into productive use. Their concern was the management of the built environment and emphasis was placed on the flow of local resources and low-income garbage collectors' groups. Radwan (2008) has also investigated the recycling sector's support to small hotels with emphasis on sustainable waste management.

Lounsbury *et al.* (2003) studied the emergence of the for-profit recycling industry. However, their focus was on the recycling social movement.

How well does entrepreneurship explain the recycling industry? Based on the above, one may conclude that the recycling literatures does not provide satisfactory insights into the nature of the recycling industry; more so as it relates to the entrepreneurship phenomenon.

2.3 Background of the Entrepreneurship Literature

As a field of academic research, entrepreneurship became popular in the 1950s and 1960s but the interest waned in the 1970s (Lounsbury, 1998). It re-emerged substantially in the 1980s (Low and Macmillan, 1988), achieved an explosion in the 1990s (Davidsson *et al.* 2001; Low, 2001) and experienced its adolescence in the early 2000s (Low, 2001). It is rooted in a myriad of disciplines (Brazeal and Herbert, 1999) including economics, sociology, psychology and anthropology (Low and Macmillan, 1988, Lounsbury, 1998). As a body of literature, it serves a diversity of purposes, units of analysis, perspectives and methodologies intertwined with a complex set of contiguous and overlapping constructs (Low and Macmillan, 1988). Large volumes of studies have been integrated with marketing, economics, finance, human resource management and strategic management. Empirical studies are wide-ranging and include the examination of management of change, innovation, technological and environmental turbulence, product development, marketing orientation, product innovation, organisational culture, succession, organisational learning, operations management, strategy, financing decisions, firm performance, venture capital, technology adoption, resource management, training and development issues in a differing national, regional, local, industry settings in micro to small and medium-sized to large enterprises, multinationals, family-owned businesses. The literature is also enriched by the different ways of theorising the entrepreneurial process. Some studies are theoretical by nature (examples: Starr and Fondas, 1992; Katz, 1992; Reynolds, 1991; Larson and Starr, 1993; Zafirovski, 1999; Floyd and Wooldridge, 1999) or empirical, involving a variety of settings such as technology intensive ventures (example: Zhao and Aram, 1995) and

manufacturing firms (example: Chetty and Campbell-Hunt, 2003; Sherer, 2003).

Nonetheless, a preliminary review of the entrepreneurship literature reveals that there are hardly any attempts to integrate recycling with entrepreneurship (see Section 2.4.2). Palmer and Andrews (1997) investigated the usage of teams to improve environmental performances in retail, research and manufacturing SMEs. Recently, Lee (2009) investigated the adoption of green management in SMEs. Although both studies investigated greening, they were far from incorporating recycling as a subject or element. However, as mentioned above, the mainstream traditional entrepreneurship literature concerns the private sector, which focuses on commercial (or business) entrepreneurship. On the basis that the recycling industry began with the privatisation of waste collection and disposal services by the public sector (see Section 1.2.1), it is only reasonable to say that there are aspects of the mainstream entrepreneurship literature which may assist in explaining the recycling industry.

Furthermore, two relatively new and developing strands have emerged in entrepreneurship research in the 1990s. They are social entrepreneurship and green entrepreneurship.

The notion of social entrepreneurship became popular in academic literature in the late 1990s. Authors who made a significant impact to the development of this notion include Dees (1998), Thompson *et al.* (2000), Fowler (2000), Mair and Noboa (2003); Mair and Seelos (2003), and (Mair and Marti, 2006). Obvious milestones in social entrepreneurship literatures are reflected in the production of the *Social Enterprise Journal* in 2005, the special issues in the *Journal of World Business* (2006) and the *International Journal of Entrepreneurial Behaviour and Research* (2008). Also, the setting-up of the *University Network for Social Entrepreneurship* allowed members to post and exchange academic material in the form of working papers on social entrepreneurship. Studies in these publications were still very much focused on models of social entrepreneurship. However, the

literature in this area has been developed in recent years. A number of those studies have adopted qualitative methodologies and case study approaches. To-date, scholarly work continues to progress resulting in an increased volume of publications, scope and depth of inquiry. Nonetheless, scholars are still striving to address the lack of conceptualisation in this area (Mair and Marti, 2006; Weerawardena and Mort, 2006) as shown in more recent studies.

The term green entrepreneurship is used interchangeably with environmental entrepreneurship, enviropreneurship, eco-entrepreneurship, ecological entrepreneurship and ecopreneurship. Throughout this thesis, the term green entrepreneur (or entrepreneurship as the case may be) is used. Similar to social entrepreneurship, the early phase of studies on green entrepreneurship were highly conceptual, with attempts to conceptualise the notion of green entrepreneurship based on the existing literature. Quite often, they focused on the phenomenon within large firms (Keogh and Polonsky 1998). However, the past decade has witnessed noticeable progress in ecopreneurship literature too. Popular publications include the two special issues in the *Journal of Organizational Change Management* (1998), one special issue in the *Greener Management International* (2002) and the book *Making Ecopreneurs: Developing Sustainable Entrepreneurship* (2005). Individual articles include studies by Hendrickson and Tuttle (1997), Walley and Stubbs (2000), Allen and Malin (2008) and Harbi *et al.* (2010). Nonetheless, there remains limited progress in empirical work (Harbi *et al.*, 2010). Likewise social entrepreneurship, scholars are still striving to address the lack of conceptualisation in green entrepreneurship (Allen and Malin, 2008; Harbi *et al.*, 2010).

The extant literature on social and green entrepreneurship and the popularly acknowledged 'hodgepodge' (Shane and Venkarataman, 2000) in mainstream entrepreneurship literature has one point in common. They may assist in an explaining the recycling industry but is limited and based on a set of assumptions which are obscure, lack empirical insights and theoretical strength. Hence, the prospect of obtaining adequate insights into 'how well does entrepreneurship explain the recycling industry?' from

these bodies of knowledge is questionable. The next sub-section provides a review of literatures which (arguably) integrate both these fields.

2.4 Integration of the Recycling and Entrepreneurship Literatures

Whilst there are limited attempts to integrate recycling in the entrepreneurship literature, the paucity of entrepreneurship studies integrated within the body of recycling literature is unequivocal to the extent that it may be argued that entrepreneurship has never been studied integrally by recycling scholars. In this Section, the extent of integration in both fields is discussed and the gap in the literatures in relation to the recycling entrepreneur is highlighted.

2.4.1 Integration within the Recycling Literature

Slater *et al.* (2006) incorporated issues of delivery of waste and recycling services in their research on sustainable technologies for waste. Although there may have been entrepreneurial events which took place in the delivery of the services, the subject was not considered. Instead, the focus was on the mechanics involved in the delivery i.e. political and policy issues, privatisation exercises and collection schemes. It is worthwhile to mention that this study was subsequently used by Aiken and Slater (2007) to report on empirical research and analysis pertaining to social enterprise activity. They focused on comparing the delivery of waste and recycling services with the delivery of work integration and advice activities for the disadvantaged. However, entrepreneurial aspects were equally not considered despite having social enterprise as the context for their work.

Another aspect in the recycling literature which appears to have some degree of integration with entrepreneurship is research on the informal waste sector. The informal waste sector is characterised by small-scale, labour-intensive, largely unregulated and unregistered, low-technology manufacturing or provision of services (Wilson *et al.*, 2006). Run by waste recyclists, alternatively known as garbage recyclers, their primary activities are scavenging and waste-picking. They are sometimes referred to as informal sector entrepreneurs (Wang *et al.*, 2008) and it may be argued that they assume entrepreneurial roles in the industry. After all, they apply

creativity and innovation to respond cost effectively to market needs (Ahmed and Ali, 2004). Furthermore, their contributions to economic growth especially in developing countries cannot be overlooked (Gutberlet, 2008).

Nonetheless, these studies seem to convey concerns for scavengers' welfare and growth from different standpoints. For example, public policy towards scavengers (Wilson *et al.*, 2006; Medina, 2000), effects of political intervention on the sustainability of their settlement (Fahmi and Sutton, 2006), economic aspects and issues of market structure, scale of operation, employment effects, constraints and developments (Van Beukering, 1994). Agarwal *et al.*'s (2005) study of recyclists in Delhi concentrated on the various aspects of their lives and their position in the recycling stream. Mitchell (2008) incorporated the subject with urban studies by linking informal waste collector population with globalisation and urban transition.

From the preceding, it appears that there are neither informed insights into the nature of the recycling industry nor entrepreneurship in the recycling industry within these literatures. These literatures may provide some insights into the recycling industry but the informal waste sector remains merely one aspect of it. Whilst the informal waste sector's contribution to economy and environment of developing countries has been recognised, the academic interests appear to centre on the livelihood of individuals rather than the entrepreneur who contributes to the development of the recycling industry.

More obvious integration is found in non-academic journals (examples: *Biocycle*, *Waste Age*). However, these publications have an average number of two pages in length and do not represent any form of conceptualisation or significant of the academic literature. Their significance seems to lie in the provision of documented evidence of the existence and contribution of the recycling industry, business and entrepreneurs. For other examples, please refer to Goldstein (1985, 2003), Gray (1999), Leroux (1999) Emerson (2005), Lord (2005), Deshpande (2009).

2.4.2 Integration within the Entrepreneurship Literature

Bruin and Lewis (2005) examined the factors which promote and hinder green entrepreneurship in New Zealand. Their study involved three short case studies and resulted in a multi-dimensional conceptual framework of green entrepreneurship. The framework emphasises the response, motivation and green actions of entrepreneurs. Incidentally, they chose the waste minimisation and recycling industry as their research setting and thus the three case studies belong to that industry. Thus, their study was essentially focused on green entrepreneurship rather than a specific focus on the entrepreneurship phenomenon in the recycling industry.

Dixon and Clifford (2007) provided some useful insights about the entrepreneurship phenomenon in a recycling business *inter alia*, that the recycling entrepreneur's idealistic values can be translated into economic assets within the context of a franchised recycling enterprise. They focused on identifying the link between entrepreneurialism and environmentalism in the business model of the enterprise, but did not seek to understand the entrepreneurship phenomenon or entrepreneurial processes that took place. Furthermore, their study was confined to a single case study of a franchised recycling social enterprise following one of the author's chanced voluntary schemes with the enterprise.

Musyck (2003) analyses the process of local industrial transformation from an ailing traditional mining sector to a modern new sector of economic activity i.e. the eco-sector, in the region of Freiberg following the German unification. The eco-sector refers to the recycling and environmental technology industry. It comprises two types of companies. The first is the industrial companies involved in actual recycling activities such as collection, transport, processing and disposal of various kinds of waste. The second is the consulting companies involved in process engineering and applied research. Musyck refers its emergence and development to the region's localised capabilities and argues that entrepreneurship has been embedded in the local society for centuries and that entrepreneurial skills played a role in the emergence of the industry. He also analyses how the processes of learning and unlearning, the existence of tacit and formal

knowledge together with the forces of social construction contributed to the development of the eco-sector.

Following the institutionalisation of recycling in university campuses, Lounsbury (1998) examined the link between entrepreneurial activities and the emergence of recycling practices at US colleges and universities. Drawing on an underlying embeddedness perspective, he theorised how recycling coordinators across various US colleges and universities created a formal organisation, College and University Recycling Coordinators, to mobilise resources and professionalize their occupation. Lounsbury termed this as 'collective entrepreneurship' (Stewart, 1989) and extended that concept by associating it with a shared sense of social marginality and linkage to a wider social movement.

As regards Desrochers' (2002) treatise, there appears to be no manifest intention to integrate both the fields. His study was aimed at examining the processes leading to the development of industrial recycling linkages and he focused on selected areas in Europe and North America. The subject of entrepreneurship emerged in his study because he found that in both contemporary and historical contexts, these linkages were the spontaneous results of entrepreneurial actions triggered by cost calculations, aimed at creating value out of by-products and/ or reducing production costs through the adoption of new inputs.

Hines's (2005) study was directed to business support issues of social enterprises in the UK and used the electrical and electronic waste refurbishment and recycling sector and the care sector as his case studies. His aim was to identify the challenges faced by social enterprises in the UK in their attempts to set up, develop and the access support needed to achieve their social, economic and environmental objectives. Other scholars have integrated both the fields in similar ways to Hines but in very insignificant ways. For example, in Thompson and Doherty's (2006) efforts to show the diverse world of social enterprise, they merely cited the co-owning of Prosperity Recycling as part of Trinity Partnership's commitment to triple bottom line principles.

A more recent integration was made by Chen *et al.* (2009) who examined recycling businesses in Taiwan and their impacts on the collection, environment, economy and society. The recycling management system, its problems and modelling constituted the core of this study with a focus on recycling fees.

The next Section discusses the limitations and gaps in the integration of recycling and entrepreneurship literatures. It ends with an emphasis on the limitations pertaining to the recycling entrepreneur and highlights those limitations as the first point of departure in order to shed light on the research question.

2.4.3 Limitations and Gaps

The plethora of studies concerning municipal solid waste and a handful concerning commercial and industrial waste from the policy and behavioural perspectives in the recycling literature have noticeably neglected the recycling entrepreneur and his or her role in the recycling industry. As laid out earlier, parts of the literature related to this concern the informal entrepreneurs. Their welfare issues are broached but no profound insights into the entrepreneurial process and its impact on the recycling industry are given.

Whilst the entrepreneurship literature has given more attention to this area when compared to the recycling literature, scholarly contributions about the recycling entrepreneur and associated issues remain limited. Bruin and Lewis (2005) conducted three case studies of recycling businesses and presented a conceptual framework that was broadly aimed at conceptualising green entrepreneurship but not entrepreneurship in the recycling industry. Similarly, Dixon and Clifford's (2007) work did not set out to study the recycling business or recycling entrepreneur. This was only incidental to the objectives of investigating the links between environmentalism and entrepreneurialism. Hines (2005) and Chen *et al.*'s (2009) foci were solely on the recycling business. They made no links with the recycling entrepreneur or the nature of the entrepreneurship phenomenon in the recycling industry. Lounsbury (1998) and Musyck

(2003) provided more prominent contributions by associating entrepreneurial events and social capital in higher education institutions and industry emergence within a regional context, respectively. However, the entrepreneurs in Lounsbury's (1998) account were confined to recycling coordinators; those persons in charge of recycling programmes who may arguably be entrusted with various other responsibilities and duties, passive and hostile towards recycling. Musyck (2003) appeared to have made a significant contribution regarding the entrepreneurship phenomenon but the recycling industry is merely a part of the eco-industry he examined. Furthermore, his analysis of the entrepreneurial process focused on learning processes in relation to industrial transformation and renewal.

2.4.3.1 Emphasis on the Recycling Entrepreneur

In light of the above, it may be asserted that the recycling entrepreneur has been under-explored by scholars in both the academic fields of recycling and entrepreneurship. However, re-visiting the main research question for this study seems to suggest that one needs to understand the recycling entrepreneur in order to understand how well entrepreneurship may explain the recycling industry.

Perhaps a basic contention lies in the entrepreneurs' inherent abilities to recognise opportunities (Baron, 2004). He or she perceives an opportunity and partakes in the necessary events associated with the creation of an organisation to pursue it (Gartner, 1989a; Bygrave *et al.*, 1991). Thus, it is reasonable to assume that the entrepreneur is the agent who is central in the crystallisation of the opportunities laid out in Section 1.2.3. He or she crystallises the recycling opportunity by recognising and enacting it. This point has been acknowledged in the early phases of some entrepreneurship studies (see Leibenstein 1968).

And perhaps more importantly, if entrepreneurship is the creation of organisations (Gartner, 1985), then the recycling entrepreneur is logically the creator of recycling businesses and his or her entrepreneurial experiences are the entrepreneurial processes in these creations. The recycling entrepreneurs are those who enact so that entrepreneurial

initiatives are carried out (Schumpeter, 1934) resulting in the formation of the business (Gartner, 1989) or improved performance of the business (Lumpkin and Dess, 1996). They may also be assumed to be individuals capable of altering the recycling industry (Schumpeter, 1934). All these seem to suggest their role in synergising resources and value adding for the recycling industry. After all, recycling businesses (within the context of this study) are those units in the recycling system which provide an avenue for diversion from landfill and help in managing the collection and disposal of waste, running materials recycling facilities to prepare the waste into feedstock for re-processors or re-processing the recyclable materials into a final usable product (see Chapter 4). Reverting to the subject of increasing emphasis on the recycling industry, which is the main thrust for this study, it appears that the recycling entrepreneur is the central figure in that evolution because entrepreneurs are the ones who succeed in creating businesses (Low and Macmillan, 1988). Consequently, the recycling entrepreneur is a subject worth exploring further. The question thus arises as to what entrepreneurship literature can help us understand the recycling entrepreneur. There are two core issues that require our attention here: the different types of opportunity available in the industry; and the different approaches used to understand an entrepreneur. These issues will now be elaborated upon.

As regards the first issue, the multi-faceted nature of the recycling industry in particular the involvement of both for-profit and not-for-profit sectors seems to suggest the availability of financial and social opportunities. In other words, there are likely to be different types of entrepreneurs having contrasting financial and social ends in mind. From another standpoint, recycling activities are deemed to contribute to landfill diversion and environmental preservation which suggests that environmental opportunities also exist. If we assume a straightforward definition for environmental entrepreneurship i.e. entrepreneurial activity that benefits the environment (Hendrickson and Tuttle, 1997), then recycling entrepreneurs should be one category of green entrepreneurs. Thus, on the one hand, entrepreneurship in the recycling industry may be seen as multi-faceted, operated by a mix of commercial, social and green entrepreneurs.

On the other hand, it can also suggest that there are different patterns of processes associated with the entrepreneurship phenomenon. After all, the literature seems to suggest that commercial, social and green entrepreneurs have different ways of acting and different motives underlying their entrepreneurial quests.

With regard to the second issue, we should consider the manner in which the attempt to understand the recycling entrepreneur may be approached. For more than two decades, the literature seems to increasingly criticise the emphasis on the individualistic views in entrepreneurship studies (Chell, 1985). Whilst there seems to be a sustained increase in the number of studies which have taken the perspective of studying entrepreneurship as a process rather than the characteristics of the entrepreneur, it has also long been recognised that the conceptualisation of the entrepreneurship phenomenon has been fragmented (Low and Macmillan, 1988; Shane and Venkarataman, 2000; Davidsson *et al.*, 2001). Furthermore, the field itself is multi-disciplinary and no single discipline can provide an adequate explanation of all its aspects (Reynolds, 1991). Generally, existing studies appear to be capable of capturing only a slice of what it may mean in varying contexts. Entrepreneurship research and theory have also been inclined towards mainstream entrepreneurship settings (Eckhardt and Shane, 2003) and the nature of opportunities that made social ventures possible has received no explicit theoretic attention (Murphy and Coombes, 2009). This neglect is also apparent in the theorising of green entrepreneurship.

Nevertheless, Brazeal and Herbert (1999) contended that researchers should conscientiously and deliberately build on previous research streams, consider explicit and verifiable definitions of the phenomena, differentiate the several manifestations of entrepreneurship and study them within frameworks that identify their commonalities as well as their unique processes and influencing factors. Bearing the above issues in mind, the following review looks upon this as a guide to develop a direction in which the recycling entrepreneur may be understood. The aim is to facilitate the

development of useful insights concerning the emergence and increasing emphasis of the recycling industry.

2.5 Understanding the Entrepreneur

The literature review in this Section is guided by a basic question: 'what entrepreneurship literature can help us understand the recycling entrepreneur?' The Section begins with a review of the different strands of entrepreneurship namely, commercial (alternately termed as business entrepreneur in the literature), social and green. A brief introduction of the different strands in entrepreneurship research, namely commercial, social and green entrepreneurship is provided. It then proceeds to review the differences and similarities between them.

The Section then proceeds to argue that the key to understanding the entrepreneur is to study entrepreneurship as a process. The review draws attention to the critics of the individualistic view and highlight that the key to understanding the recycling entrepreneur is to consider what he or she does as well as how and why does he or she does it. The argument is that the entrepreneur is central and important but the key to understanding him or her is to study the process in which he or she partakes in his or her entrepreneurial journey. This naturally also takes account the context.

Thereafter, the review proceeds to focus on studying entrepreneurship as a process. It begins with Gartner's contributions in this aspect, particularly the move from traits to behavioural approach, and his four dimensional framework which emphasises the combination of variables (1985, 1989). Consequently, the criticality of the interactive process between the individual and the context is highlighted. It is argued that in order to understand the recycling entrepreneur, one needs to understand the underlying nature of the entrepreneurship phenomenon. Furthermore, the key to understanding this is to account for the entrepreneurs' social embeddedness (Jack and Anderson, 2002) and his or her perception of value (Anderson, 2000a). Value perception is argued to shape opportunity construction. The Section closes by explaining the intention to study the entrepreneurial process using the interactionist model.

2.5.1 Different Strands in Entrepreneurship Research

Thus far, it has been noted that there are different types of entrepreneurs in the recycling industry who are likely to have different motives and objectives. In part, this is a result of the involvement of both profit and not-for-profit sectors (see Section 1.2.3). However, the different types of entrepreneurs may also be borne from the likelihood of a mix of entrepreneur breeds namely commercial, social and green entrepreneurs. It appears that understanding whether the entrepreneur is a commercial, social or green entrepreneur is important because the literature seems to suggest that each type of entrepreneur has a generically prescribed pattern of behaviour and actions as well as underlying motives. In turn, this seems to suggest important implications for how and why the commercial, social and green entrepreneurship phenomenon takes its shape and course. To expatiate, a particular group of the entrepreneurs (for example, social) is likely to suggest a generic shape of the entrepreneurial process (orientated towards social objectives) and reflects the entrepreneurs' predominant value (social value) in their entrepreneurial activities. This has implications for the form of entrepreneurship phenomenon (social entrepreneurship) which takes place.

The literature does not seem to provide a straightforward conceptualisation of each phenomenon. Whilst the core differences seem clear and easily comprehensible, the existing literatures have also raised issues of overlapping characteristics. Given that these are all different forms of entrepreneurship, it is not surprising they share basic entrepreneurial characteristics present in all of them. The entrepreneurial drive and the ability to recognise an opportunity are two examples of these characteristics. The distinctive feature appears to be the manner in which the entrepreneurial drive is portrayed and in what ways the opportunities may be perceived. Nonetheless, there are some ambiguities: firstly, as to what really constitutes a particular type of entrepreneur; and secondly, the different extremes of what have been understood as commercial, social and green entrepreneurship. This point is demonstrated in the following review.

The mainstream entrepreneurship literature commonly relates the notion of entrepreneurship to profit-making as ultimate ends, hence commercial entrepreneurship (also termed business entrepreneurship). This appears to be true whether they are the works of the economists (Say, 1803; Knight 1921; Schumpeter 1934; Kirzner, 1983) or sociologists who were led by McClelland (1971). On the other hand, the green and social orientations of green and social entrepreneurs distinguish these relatively new breeds from the mainstream notion of commercial entrepreneurship.

Commercial entrepreneurship is about the pursuit of profitable opportunities and has economic returns as its central objective (Venkarataman, 1997; Sharir and Lerner, 2006). The entrepreneur is a person who acts out his or her vision in a market niche (Schumpeter, 1934). In doing so, he or she starts and organises a commercial enterprise involving financial risk (Peredo and McLean, 2006) to generate income for his or her personal interest (Carland *et al.*, 1984). Entrepreneurial discovery in the commercial sector is the recognition of circumstances which allows introduction of new goods, services, raw materials and markets into a market system as an organised venture intended to create economic value (Casson, 1982).

Social entrepreneurship focuses on the innovative pursuit of social opportunities to create and disseminate social value (Bornstein, 1998; Peredo and McLean, 2006). But the literature seems to suggest different extremes of social elements in social entrepreneurship.

Firstly, in the pro-social motive enterprise, there is no economic value attached and wealth generation activity is deterred by the emphasis in social outcomes at the expense of a surplus that may be re-invested in the enterprise. There is no commercial activity and the enterprise relies on grant-aid for survival (Chell, 2007). The enterprise is solely aimed at social improvement, development, justice and responsibility for all stakeholder groups (Cartford, 1988; Dees, 1998; Prabhu, 1999; Fowler, 2000; Sfeir-Younis, 2002).

Secondly, there are social enterprises which may engage in commercial exchanges but as an instrumental necessity in supporting the social venture (Dees, 1998; Peredo and McLean, 2006). The social enterprise may need to make a surplus that will assure their survival, and to do so in the long term they should become entrepreneurial (Chell, 2007). Fowler (2000) termed this 'integrated social entrepreneurship' whereby economic activities are designed to create positive social outcomes, surplus generating activities simultaneously create social benefits and horizontal, vertical, forward or backward economic linkages.

Thirdly, there is the notion of 'complementary social entrepreneurship' (Fowler, 2000). This is where an enterprise which does not in itself produce social benefits supports some other activity meant to generate the desired outcomes, for example non-profits in association with for-profits (Pomerantz, 2003).

Fourthly, and further away from the pro-social motive extreme, Peredo and McLean (2006) introduce those who allow that social goals need only be among the objectives. These may even be subordinate to the aim of personal gain. Thus, social entrepreneurship is often based on ethical motives and moral responsibility but the motives for social entrepreneurship may also include less altruistic reasons such as personal fulfilment (Mair and Marti, 2006). Perhaps, an entrepreneur cannot be defined as being a **social entrepreneur** throughout his or her entrepreneurial journey? And perhaps, **social entrepreneurship** exists in different levels of intensity, depending on the prevailing environmental conditions?

Peredo and McLean (2006) seem to suggest profit as prime purpose and social benefits as an additional outcome. Furthermore, according to Venkataraman (1997), social wealth is a by-product of economic value creation for the commercial entrepreneur. From another standpoint, whilst the mission of value creation might be the core, it does not mean that the entrepreneur has no other motivations. The profit motive may be "a central engine" of entrepreneurship but it does not preclude other motivations (Shane *et al.*, 2003). Perhaps also, an entrepreneur in the commercial

sector cannot be defined as a **commercial entrepreneur** throughout his entrepreneurial journey? And perhaps also, a **commercial entrepreneurship** exists in different levels of intensity, depending on the prevailing environmental conditions?

It therefore appears that both commercial and social entrepreneurs can be present simultaneously although with different intensities. This further raises the question of whether different kinds of entrepreneurship can change over time. For example, social entrepreneurship can occur in for-profits who incorporate social goals. It then follows that the classic argument that the social mission is explicit and central for social enterprises (Dees, 1998; Mair and Marti, 2006) and the generalisation of a culture and ethos based on principles of voluntarism, ethical behaviour and a mission with a social cause for social entrepreneurship (Chell, 2007) may be questioned. However, Dees (1998) said that the social entrepreneurship mission is inspired by a set of behaviours and argued that in the same way that entrepreneurial attitude is not guaranteed in every business leader, so too, not every social leader is socially entrepreneurial. Linking this to the concept of entrepreneurial virtue, perhaps Mort *et al.* (2003) would regard them as unsuccessful social entrepreneurs.

Up to here, this review has shown the differences between commercial and social entrepreneurship. It has also drawn attention to some of the ambiguities involved in distinguishing commercial and social entrepreneurship. The following review of green entrepreneurship will point further to the ambiguities involved in distinguishing the occurrence of the commercial, social and green entrepreneurship phenomena.

Green entrepreneurship is a response to sustainable development and market failure by tapping green opportunities (Harbi *et al.*, 2010). Accordingly, green entrepreneurs are catalysts for change and advancement in both an economic and environmental sense (Anderson 1998; Isaak 1998; Krueger 1998; Pastakia 1998). In other words, as the term suggests, it is a mix of entrepreneurial spirit, passion, humility and a sense of personal obligation to the environment and society (Allen and Malin, 2008). Green

entrepreneurs employ the power of entrepreneurially wrought change to achieve environmental improvement (Harbi *et al.*, 2010), assess the potential of resources and opportunities through their lenses of environmental commitment (Keogh and Polonsky, 1998) so that environmental values are the core component of their business identity (Gerlach, 2003). This is a straightforward understanding of what green entrepreneurship entails. Table 2.2 tabulates some examples of typologies for green entrepreneurs.

Author	Typology
Harbi <i>et al.</i> (2010)	Obvious sustainable orientation; Less obvious sustainable orientation
Allen and Malin (2008)	Low levels of interest in economic success; High degrees of awareness about the business' environmental impact; and High levels of concern for social justice.
Bruin and Lewis (2005)	Market orientation Green micro-entrepreneurship response
Taylor and Walley (2004)	Innovative opportunists; Visionary champions; Ethical mavericks; and <i>Ad hoc</i> enviropreneurs
Schaltegger (2002)	Alternative actors; Bioneers; and Ecopreneurs
Linnanen (2002)	Non-profit business; Self-employer; Opportunist; and Successful idealist
Schick <i>et al.</i> (2002)	Not a typology but a comparison between ecologically oriented start-ups and conventional start-ups: Eco-dedicated; Eco-open; and Eco-reluctant

Table 2.2: Examples of Green Entrepreneur Typologies
(Source: Extracted from Various Sources)

It is not within the interest of this Section to critique the manner in which the above typologies have been deduced or even to compare them. However, it is necessary to highlight a few issues. Although terminologies used may vary, there is considerable overlap in terms of underlying characteristics between these concepts. However, like social entrepreneurship, green entrepreneurship comes in many varieties and employs many different processes (Harbi *et al.*, 2010). In what follows, the relationship between green-commercial entrepreneurship and green-social entrepreneurship is presented.

Green entrepreneurs are similar to commercial entrepreneurs because they combine money, people, ideas and resources in their entrepreneurial quest. However, they differ in that green entrepreneurs bridge environmental progress and market success while commercial entrepreneur do not (Schaltegger, 2002). On the one hand, the green entrepreneurs are tempered by their humility regarding their role in larger social movements (Allen and Malin, 2008). Their idealism is to make a small difference to the world while making their own living (Choi and Gray, 2008). This seems to suggest a lesser focus on financial gains but a stronger focus on a socially perceived sense of value generation (Harbi *et al.* 2010). These are the ideal green entrepreneurs who create green-green businesses (Isaak, 2002) that are intended to socially transform the industrial sector in which they are located towards a model of sustainable development (Isaak, 1998). For example, innovative businesses designed to supply and promote environmental products and services as a start-up through market or non-market routes (Isaak, 2002; Pastakia, 1998; Schaltegger, 2002). Their personal values are based on notions of environmental integrity, social justice, fair trade, living wages and the development of high quality products and services that are hoped to last generations (Allen and Malin, 2008). These qualify them as social ecopreneurs (Pastakia, 1998), suggesting the blending of the notion of social entrepreneurship into green entrepreneurship.

However, Gerlach (2003) contended that although green entrepreneurship forms a part of the social element in social entrepreneurship, green

entrepreneurship typically concerns business organisations whilst social entrepreneurship concerns the social economy. Gerlach's (2003) contention seems weak if the earlier discussion regarding social entrepreneurship is considered. Firstly, it seems reasonable to assume that the main world of social entrepreneurs is the voluntary or non-profit sector (Thompson *et al.*, 2000) although it is not always confined to that. Secondly, there is a strong indication that the abovementioned description of green entrepreneurship may rightly suit social entrepreneurship. Furthermore, Choi and Gray (2008) found only a small portion in their sample of for-profit entrepreneurs who are committed to sustainability focused on accumulating personal wealth. All these seem to support the ideas that green entrepreneurship can occur in the social economy (Rennings, 2000) and that green entrepreneurship is inclined towards the social rather than the commercial element.

Nonetheless, green entrepreneurship in the commercial sector cannot be ignored. There are organisations in the private sector which started off with environmental and social issues as their core objectives and competitive advantage. Pastakia (1998) termed these entrepreneurs, 'commercial ecopreneurs'. Alternatively, they may be green entrepreneurs in typical green businesses (Isaak, 2002) who did not start out in the ideal green-green manner or with the intention of utilising environmental and social issues to their advantage at the start-up. Instead, they re-orientated themselves in the middle of their entrepreneurial journey to incorporate greening into their business activities following the recognition of ethical, cost, marketing and innovative advantages attached. In both instances, *"being green is not a cost of doing business, but a catalyst for innovation, new market opportunities and wealth creation"* (Hartman and Stafford; 1997, p. 187). Examples of greening activities incorporated are strategic partnerships between environmental non-profits and the for-profit business sector (Hartman and Stafford, 1997; Rondinelli and London, 2003), whereby climate change is treated as a business opportunity (Cook and Barclay, 2003; Aulisi *et al.*, 2004) and business strategies designed to capture a growing market for environmentally sustainable products and services are pursued (Smith, 2001; Pujari *et al.*, 2003).

In this Section, the extant literature in commercial, social and green entrepreneurship has been reviewed. Attention was drawn to the issues involved in understanding the entrepreneur and conceptualising the entrepreneurship phenomenon. The next Section contextualise the findings of this review. The implications of these findings on the approach to understand the recycling entrepreneur is also considered.

2.5.2 Contextualising the Issues

This Section synthesises the key findings in the preceding Sections of this Chapter especially Section 2.5.1, draws attention to the limitations in the literature and contextualises the problem.

As a starting point, it is important to re-state that the recycling industry presents a form of entrepreneurship which is lacking in conceptualisation. The recycling entrepreneur is the central figure in the phenomenon of entrepreneurship in the recycling industry. He or she is therefore a useful first point of departure to understand the phenomenon of entrepreneurship in the recycling industry. A review the literature in the academic fields of recycling and entrepreneurship has revealed that the recycling entrepreneur is under-explored. However, there are aspects of the entrepreneurship literature which may assist in understanding the recycling entrepreneur.

Given that the recycling industry comprises different types of recycling entrepreneurs, the review started off by examining the different strands of entrepreneurship research namely commercial, social and green entrepreneurship. From the outset, this framework seems to suggest that who the entrepreneur is shapes how he or she approaches the process of entrepreneurship. For example, the commercial, social and green entrepreneurs focus on profit generation, social motive and sustainability elements, respectively. Who they are (for example, commercial entrepreneur) shapes how (focuses on profit generation) they conduct their activities and which process they adopt (manifests commercial entrepreneurship). Accordingly, commercial, social and green entrepreneurship phenomena are all expected to manifest in the recycling industry.

Furthermore, all recycling entrepreneurs may be assumed to be green entrepreneurs. This may mean that the existing typologies of green entrepreneurs and green entrepreneurship frameworks can be scrutinised to develop an understanding of the recycling entrepreneur so that the phenomenon of entrepreneurship in the recycling industry may be conceptualised. However, it is shown in Section 2.5.1 that a straightforward assumption cannot be built on if a cogent understanding of the recycling entrepreneur is to be developed. The next paragraphs dwell further on this point.

Broadly speaking, it has been said that the green entrepreneurship literature is still lacking in the area of conceptualisation. On one hand, green entrepreneurship should reasonably encompass a wider context than the recycling context. For example, the late Anita Roddick's Bodyshop is a form of green entrepreneurship too although it has nothing to do with recycling. On another hand, positioning the phenomenon of entrepreneurship in the recycling industry or the exploration of the recycling entrepreneur within the green entrepreneurship framework is likely to confine insights to the boundaries of a limited area of conceptualisation.

Furthermore, not positioning the phenomenon of entrepreneurship in the recycling industry or the exploration of the recycling entrepreneur within the green entrepreneurship framework does not imply freedom from this problematic either. It is easy to comprehend that commercial, social and green entrepreneurship phenomena manifest in the recycling industry because there are commercial, social and green entrepreneurs. However, Section 2.5.1 has shown the blurring of boundaries between these different forms of entrepreneurship. The issue of green-commercial entrepreneurship and green-social entrepreneurship arises. Along with these ideas come the ambiguities pertaining to what truly constitutes commercial and social entrepreneurship or whether entrepreneurs can retain a constant label of green-commercial and green-social entrepreneur through different times and uncertainties.

The preceding discussion has brought to attention some problematic issues. On the one hand, the literature has implied that the recycling entrepreneur is a green entrepreneur. Therefore, the phenomenon of entrepreneurship in the recycling industry is green entrepreneurship. However, there is insufficient progress in the green entrepreneurship literature to shed light on the question: how well does entrepreneurship explain the recycling industry? It therefore seems more rational to explore the recycling entrepreneur and the corresponding entrepreneurship phenomenon as an independent strand, rather than as green entrepreneurship while bearing in mind that it may be assumed to be a neglected breed in green entrepreneurship. This stance is also likely to minimise problems relating to the blurring of boundaries and ambiguities in the conceptualisations of social versus commercial entrepreneurships.

From another standpoint, an entrepreneur may be a commercial entrepreneur and still manifests the social entrepreneurship phenomenon and vice-versa. The blurring of boundaries implied in the existing literature seems to suggest that we cannot know who they are throughout the entrepreneurial journey. There may be a mixture of commercial and social values in any one entrepreneur at any unspecified time. But to what extent is that important? What are these implications on the approach to understand the recycling entrepreneur? The ensuing parts of this Section addresses these issues and raises the research questions for this study.

2.5.3 Traits Approach

The previous Section has contextualised the issues involved in an attempt to understand the recycling entrepreneur. Yet, understanding the entrepreneur remains crucial because he or she is central to the creation of organisations. The purpose of this Section is to consider this apparent problematic in light of the traditional traits approach.

Entrepreneurship has been historically conceptualised and studied as an individual level phenomenon (Lounsbury, 1998). Questions which revolved around '*why do certain individuals start firms when others do not*' have led scholars to answering with *who* i.e. 'why did X start a venture' (Gartner,

1989, p.47). This led to an overwhelming perception that the entrepreneur is importantly different from the non-entrepreneur; hence it is important to distinguish entrepreneurs from non-entrepreneurs. Distinctions may be explored in a narrower scope, for example, between the female minority and non-female minority entrepreneurs (De Carlo and Lyon, 1979).

Studies about the psychological profile of the entrepreneurs such as the need for achievement (McClelland, 1971), entrepreneur's background, experiences and personality traits (Hoad and Rosko, 1964; Vesper, 1980; Carland *et al.*, 1984) dominated the field. This approach (i.e. the traits approach) has been acknowledged for its usefulness. Psychological characteristics such as the need for achievement and risk-taking propensity have been useful in distinguishing different types of entrepreneurs (Brockhaus, 1982). Individual characteristics such as previous work experiences and age have also been useful in describing entrepreneurs (Cooper, 1970; Thorne and Ball, 1981). Bird and Jelinek (1988) acknowledged the use of this approach for intuitive sense-making. Krueger and Brazeal (1994) associated entrepreneurial optimism with successful opportunity recognition.

However, this approach has also been widely criticised (Gartner, 1985; Gartner, 1989; Low and MacMillan, 1988). The reasons may be manifold. It has been revealed that studies which adopted the individualistic view produced mixed results which cannot truly assist in understanding the entrepreneur or explaining the phenomenon of entrepreneurship. Unlike Brockhaus (1982) (see above), Litzinger (1965) did not find the need for achievement useful in describing entrepreneurs. A cognitive study by Shaver and Scott (1991) featuring psychometric tests searching for distinctive "entrepreneurial" traits was unable to find differences in most personality traits between entrepreneurs and managers or the general public. To date, most entrepreneurship researchers would agree that the focus on stable psychological characteristics of successful entrepreneurs is unsatisfactory (for example, Aldrich and Zimmer, 1986). Thornton (1999) has also noted that the idea that psychological traits alone account for entrepreneurship has been largely abandoned.

An alternative to the above was to prove that entrepreneurial firms are different from non-entrepreneurial firms (Thorne and Ball, 1981). Research in this domain holds that if one can accurately describe the personality or social group of an individual entrepreneur, one can then infer how, why and where new businesses are founded (Thornton, 1999). Another alternative domain is to isolate key variables that separate entrepreneurial situations from non-entrepreneurial ones (Pennings, 1982). Despite these attempts, the question remains: can the individual's behaviour truly be separate and independent of the situations that he or she is in? In her seminal paper, Chell (1985) posited that an individual behaves in a particular way following a particular meaning which he or she interpreted from the situation. If we reflect this in light of our behaviour and responses towards our external circumstances (for example, the responses and reactions of various parties concerning the economic crisis), it would appear that there is a lot of truth in that argument.

If one were to limit the scope of this study at large (and this sub-section in particular) to the boundaries of the traits approach, then the attempt to understand the recycling entrepreneur seems a hopeless quest. There is also a possible mix of commercial and social values; thus promoting the notion that it may be impossible to define who the entrepreneur is throughout the entrepreneurial journey. It therefore seems that an entrepreneur cannot be assumed to be an unchangeable character throughout the entrepreneurial journey, and as such an attempt to understand him or her as an individual is unlikely to shed useful insights for the conceptualisation of the entrepreneurship phenomenon in the recycling industry.

When these critiques are placed in the context of the above-mentioned apparent problematic, it may be claimed that knowing who the entrepreneur is as an individual is not critical. The entrepreneur is important and central to the entrepreneurship phenomenon. However, knowing who he or she is in terms of his or her characteristics, which sector he or she belongs to and to what extent he or she is social, commercial or green appears to be less relevant.

It must also be mentioned that more recently some researchers have produced a 'modern version' of the traits approach and have taken into account a broader personality frame to include cognitive elements (Rauch and Frese, 2007; Baron, 2004) and affective elements (Chell, 2008; Locke and Baum, 2007; Goss, 2005). 'Who is an entrepreneur' thus remains a legitimate issue although not the only question (Chell, 2008). The entrepreneur remains central in the creation of organisations and is the architect of the entrepreneurship phenomenon. To neglect the entrepreneur and shift the focus of research to firms is as good as omitting the individual who makes decisions and takes actions with respect to entrepreneurship (Chell, 2009).

However, the myth of the individualised entrepreneur still persists (Dodd and Anderson, 2007). As far back as 1980, Van de Ven (1980) had warned against temptations to be drawn to it. As recently as 2009, Chell (2009) has highlighted researchers' tendency to persist with needs for achievement, internal locus of control and risk-taking propensity. (Dodd and Anderson (2007) considered that a possible explanation may be the complexities of a combination of ideology, popular image, heuristic social construction and methodological individualism versus the convenient myth of the heroic individual. To this end, perhaps the identification of the above mentioned apparent problematic has its advantages in that the researcher is unlikely to wade into this approach. The next sub-section considers the possibility of moving the emphasis away from the entrepreneur and to direct focus to the firm: the situational model. With this perspective, the entrepreneurial behaviour underlying the entrepreneurship phenomenon is seen as a function of the situations as opposed to personality (Chell, 2009).

2.5.4 Situational Model

This approach prioritises the environmental context in which the entrepreneur operates such as social and economic issues. It has been noted that this model has received scant support from psychologists although it has fared better than the traditional traits approach (Chell, 2009).

The situational model seems to be worthy of consideration. Firstly, the criticality of the environmental context has been implicit in the works of both economists (Kirzner, 1973; Schumpeter, 1934) and sociologists (Burt, 1992; Granovetter, 1973). Secondly, the criticality of the environmental context is reflected in the implications of the UK policy context on entrepreneurial opportunities (see Section 1.2.3). Referring to the latter, the literature also provides controversial views regarding the opportunity concept. For example, Davidsson (2003) questioned whether opportunities exist 'out there' or entrepreneurs create opportunities where none existed before they conceived them. This also raises scepticism about how an opportunity can be construed as an opportunity before it is realised, which brings us back to the entrepreneur as the central figure of the entrepreneurship phenomenon; the architect of the entrepreneurial events.

As said earlier, the question of 'who is the entrepreneur?' remains a legitimate issue but not the only question. The entrepreneur should be taken as merely a part of, and not single-handedly the creator of new venture. It may be important to add here that the situations would reasonably remain a legitimate but not the only inquiry. There are serious flaws in the situational model too. If the entrepreneur studied in isolation is flawed, then it appears logical that the environmental context in which he operates when studied in isolation is also flawed. Referring to John Donne's famous poem- '*no man is an island, every man is a piece of the continent, a part of the main...*' – a strong emphasis is placed on relationships and interdependence as opposed to the independence of each person. When this is placed within the academic context, we see structures of economic situations resulting in human relationships which facilitate new knowledge (for example, in sociology: Burt, 1992; Granovetter, 1973). However, in an environment of contrasting cultures like the recycling industry where it is shaped by different types of entrepreneurs, it is implicit that the situational variables cannot be ignored too. The next sub-section deals with the conceptualisation of entrepreneurship as a process: firstly, with an emphasis on the contextual event; and secondly, with an emphasis on interactive processes.

2.5.5 Studying Entrepreneurship as a Process

This Section begins with a review that deals with the conceptualisation of entrepreneurship as a contextual event i.e. the combination of both individual and situational variables (Gartner, 1985; 1989; 1989a). Values and motivation as core elements in the social construction of the entrepreneurial process is then highlighted.

2.5.5.1 Gartner: Process Orientation and Behavioural Approach

Gartner made a very significant contribution to the shift away from the traits approach. His seminal paper which proposed a conceptual framework to describe the phenomenon of new venture creation (1985) drew attention to some critical issues. He highlighted the complexity of the phenomenon, stressing diversity:

'... entrepreneurs and their firms vary widely; the actions they take or do not take and the environments they operate in and respond to are equally diverse- and all these elements form complex and unique combinations in the creation of each new venture' (p. 697)

Gartner (1985) was greatly concerned with the overwhelming association between entrepreneurs' traits and the venture created which implies a basic assumption that all entrepreneurs and their ventures are much the same. According to him, this unidimensional approach presents some flaws. Firstly, it assumes that the entrepreneur operates in isolation thereby ignoring the influences of the external environmental context. The start of the venture must be instigated by some form of opportunities (or potential, as it may be argued) in the environmental context which are deemed to give some form of value upon its successful exploitation. Secondly, it assumes that entrepreneurship is stagnant throughout. Time and again, we witness maturity and growth (or conversely, exit) of firms and so that would not be a convincing assumption. Thirdly, it ignores the changing organisational and environmental context in which the entrepreneurship phenomenon takes place over time (Bruyat and Julien, 2001). The media has consistently revealed changing environmental context at all times.

Gartner (1985) proposed a four dimensional framework which would encourage researchers to think in terms of a combination, instead of, isolation of variables. The first dimension is the individual(s) or persons involved in starting the organisation. The second dimension is the organisation or the firm created. The third dimension is the environment or the situation surrounding and influencing the new organisation. And the fourth dimension is the new venture process which is actions undertaken by persons to start the new venture.

Gartner (1989) emphasised that asking 'who is the entrepreneur?' is the wrong question and the entrepreneur taken in isolation is the wrong research object. However, he refined his earlier stance with a strong process orientation with the behavioural approach and acknowledged the process of organisational emergence as a contextual event. Researchers were directed to what the entrepreneur does or the act of entrepreneurship and process in which organisations are created; not who the entrepreneur is, which focuses on the actor and his or her intentions. The individual is viewed in terms of his or her activities undertaken in the creation of the organisation and not the primary unit of analysis which is the organisation. This approach involves a re-orientation to question 'how do organisations come into existence' in place of 'why do some individuals start firms when others do not'.

Gartner's works are a significant landmark in entrepreneurship research. His acknowledgment of contextual events and redirecting focus from intention to creation justifies the complexity of entrepreneurship that has been well-honoured by researchers in the field. It may also have provided a basis for Low and MacMillan's (1988) critique on the importance of understanding context, process and outcomes; which hand-in-hand, brought about advances in the field. Van de Ven (1993) has argued that the study of entrepreneurship is deficient if it focuses exclusively on the characteristics and behaviours of individual entrepreneurs and treats the social, economic, and political infrastructure of entrepreneurship as externalities whilst asserting the social system perspective. Aldrich (1990) suggests that the founding of new organisations can be influenced by intra-population, inter-

population, and institutional factors. Shane and Venkarataman (2000) posit characteristics of individuals and opportunities as the first-order forces explaining entrepreneurship and hold that environmental forces are second order. Linnanen (2002) argues that the emergence of eco-businesses has been influenced by geographical factors, market emergence and the degree of enforcement of the environmental standards. Considerable progress has also been made in empirical studies pertaining to regional environments (Bruno and Tyebjee, 1982; Keeble *et al.*, 1990). Reynolds *et al.* (1994) posited that there are generic factors on the regional level which have a positive impact on new firm formation rates.

2.5.5.2 Entrepreneurial Process from the Social Constructionist Perspective

From another standpoint, it may be argued that complacency in Gartner's framework may also hamper the field's development. Indeed, entrepreneurship is about combination and this approach has given due respect to that. But more importantly, Anderson (2000a) points out that the essence of entrepreneurship lies in **how** individuals combine abilities and ideas into a structured business role not limited to the venture creation event which operates in a relatively short time frame compared to the entrepreneurial process. That is to say, entrepreneurship is more than a process of organisational emergence (Gartner, 1985) or being but rather of becoming (Bygrave, 1994). Hence, it needs to be understood far more than a mere contextual event. It needs to be studied as a process activity (Morris *et al.*, 1994) i.e. to account for the interactive processes between the entrepreneur and the context.

The process orientation and behavioural approach presented in the preceding Section has been beneficial in that it accounts for the study of entrepreneurship as a process. However, it is a limited scope of process. It has recognised the importance of combinations between individual and situational variables in entrepreneurship but has neglected the interactive element which made it possible. There appears to be one similarity with the earlier two approaches: it seems incapable of explaining forms of entrepreneurship that are enabled by shifting social interactions such as

those experienced in social movements and communities (Krueger and Brazeal, 1994). It also seems to underrate the embeddedness in the social, environmental, political and regulatory system and the eminent social character that entrepreneurship possesses (Zafirovski, 1999). Yet, the heart of entrepreneurial success is its essential entrepreneurialism and its embeddedness in these contexts (Mair and Marti, 2006).

To ignore the context is to ignore both the milieu and material from which entrepreneurship is formed (Anderson, 2000a). To ignore the entrepreneur is to ignore the individual who makes decisions and takes actions with respect to entrepreneurship (Chell, 2009). Thus, as pointed out earlier, 'who is the entrepreneur?' remains a legitimate but not the only question (Chell, 2009). In a similar vein, situations would reasonably remain a legitimate but not the only inquiry. As such, to ignore the interactive processes between the entrepreneur and the context is to ignore the mechanism and fuel of the entrepreneurial process.

Entrepreneurial venturing is reflected in the multiple social constructions involving the interplay between individual and collective forces (Anderson, 2005). Interactions between process and context in a recursive and continuous manner drive the fate of entrepreneurial efforts (Aldrich, 2001). For example, Ray and Cardozo (1996) claimed that personality characteristics and the environment interact to create conditions that foster higher entrepreneurial alertness (Sathe, 1989; Hisrich, 1990; Gaglio and Taub, 1992). There has also been a shift to an interactive perspective in entrepreneurship studies as represented *inter alia* by Venkataraman (1997), Bruyat and Julien (2001) and Landstrom and Johannisson (2001). Jacobs (1961) on his part illustrated how a city's vitality is founded on social bonds between neighbours. Anderson (1998) said that autonomy, an entrepreneurial characteristic, is independent within a social system. Lindgren and Packendorff (2002) argue that entrepreneurship is not the result of what single individuals do but the consequence of collective organising and social interaction. Dacin *et al.* (1999) and Jack and Anderson (2002) have provided empirical evidence for the social embeddedness of entrepreneurship.

Thus, this perspective does not hold for the individual operating in isolation from the context and the context is not the sole determinant of outcomes; and it goes beyond the appreciation of entrepreneurship as a contextual event to understand the interactive process. The emphasis is on the interactive element, i.e. the complex and dynamic interaction between the entrepreneur and the context over time (Bouchikhi, 1993). Chell (1985) found that the entrepreneurs' actions were multitude. They range from routine to radical responses and from novel to common courses of actions. They are also dependent on environmental conditions. Reflecting on this from another perspective, the entrepreneur being a creative change agent should logically and entrepreneurially develop a strategic action plan, evaluate potential outcomes with alertness and skilfully apply his or her competencies to the circumstances at hand. Therefore, the ongoing dialogic between the individual and the new value creation and the environment (Bruyat and Julien, 2001) is a central concern in the attempt to understand the behaviour and actions of the entrepreneur. Bruyat and Julien (2001) also emphasise the point made earlier that the entrepreneurship phenomenon can only be understood by understanding the entrepreneur, the project, the environment and the links between them over time because he or she is a '*human being capable of creating and influencing the environment*' (p.165). It therefore seems a good approach to adopt a '*sumpsimus*' which accounts for the individual, context and the interactive processes therein (Dodd and Anderson, 2007). In this '*sumpsimus*', the entrepreneur's social embeddedness (Granovetter, 1985) is recognised whilst he or she remains at the centre of the entrepreneurial stage so that the relationship between the entrepreneur and society in enacting his or her entrepreneurial agency can be explored.

Moving on from there, the opportunistic behaviour (Chell, 2000) should reflect a function of the joint characteristics of the opportunity and the nature of the individual (Shane and Venkataraman, 2000). In the pursuance of opportunities, it has been shown that entrepreneurship involves human agency. In other words, entrepreneurship takes place because people act to pursue opportunities available in the context (Shane, 2003). Sarason *et al.* (2006) drew attention to the **interdependency** of individual-opportunity

nexus. But a specific individual may not identify any opportunity or several individuals may have different identifications attached to an opportunity (Shane, 2000). This has been elaborated in Section 2.5.1. There can be a mix of financial, social and environmental elements in any one entrepreneur. The importance arguably lies in the implications for a set of behaviours, decisions, actions that shape the entrepreneurial process because that is what makes the entrepreneur central and important to the entrepreneurship phenomenon. Hence, the entrepreneurs' inclination toward financial, social or environmental motives commands the venture ideas that they can and will pursue (Davidsson, 2003). Shane and Venkataraman (2000) have indicated that opportunities are not singular phenomena but are idiosyncratic to the individual, which also seems to suggest that opportunities emerge through continuous shaping and developing of ideas that are acted upon (Dimov, 2007). Dimov (2007) also highlights the contextual and social influences that shape the development of ideas, thus supporting Fletcher's (2006) contention that opportunity discovery can be conceptualised as relationally and communally constituted. He also supports Pittaway's (2000) argument that the reasons for being in business impact entrepreneurs' behavioural strategies and affect the way they relate to their external environment. Understanding why and how entrepreneurs act, as they do (Baron, 2004) in a dynamic relationship with their context is thus an important point to begin understanding the entrepreneur and the entrepreneurial process. What then would be a useful point of departure?

Anderson (2000a), in supporting Chell (1997), suggested that *'we can reduce the outcome of experiences such as socialisation, enculturation and specific experience as individual's values* (p. 208). Values relate to that element of importance which crystallises the actions (or inactions) of enterprise. Reflecting on the different forms of opportunities in the recycling industry, value perception does appear to be a useful point of departure for understanding the dynamic relationship between the entrepreneur and his or her environment (Anderson, 2000a). Whilst not all potential entrepreneurs will exploit opportunities with the same expected value (Shane and Venkataraman, 2000) with regard to their inclinations towards

financial or social value creation, all of them have one commonality: *'they incorporate and consolidate the value perceptions of the individual into the inner workings of an eco-friendly business'* (Anderson, 1998, p.139). However, in order to understand the entrepreneur and the entrepreneurship phenomenon, it is important to understand the value derived by and within entrepreneurial action (Anderson, 1998).

2.6 Research Questions

Although there seems to be significant development of both recycling and entrepreneurship literatures independently over the past decades, little exploration has been made to bring these literatures together in order to understand the recycling entrepreneurs. This study therefore attempts to understand the recycling entrepreneur and does so by studying entrepreneurship as a process. The understanding of the interactions between the entrepreneur and context is emphasised. Nevertheless, this does not mean excluding the attempt at understanding the entrepreneur and the context by itself. In order to understand the interactive process over time, it is necessary to understand the subjects of this interaction over time too. Accordingly, the overarching research question, 'How well does entrepreneurship explain the recycling industry?' has been unpacked and three sub-research questions aimed to generate understandings of the nature of structure, agent and agency are raised to guide the fieldwork. They are:

- What is the nature of the recycling industry?
- What is the nature of the recycling entrepreneur's behaviour, motivation, decision and action?
- How are values recognised and enacted during interactive processes?

CHAPTER 3

METHODOLOGICAL CONSIDERATIONS

3.1 Introduction

The literature review in Chapter 2 has generated sub-questions to provide a focus for the fieldwork so that insights into the main research question, 'how well does entrepreneurship explain the recycling industry?' can be developed. This Chapter proceeds to deal with the underpinnings and building blocks of methodological issues for this study.

In Section 3.2, the selection of theoretical orientation is made. This selection is based on the consideration of the philosophical underpinnings and the nature of the research problem. Section 3.3 makes a case for qualitative inquiry, in accordance with the selection of the social construction view as theoretical orientation, and the interpretivist and constructivist stances adopted for this study. Section 3.4 presents the research strategy that has been undertaken where collaborations with the Business Environment Partnership-North East (BEP-NE) are elaborated. Section 3.5 presents the research design, bringing into attention the use of multiple methods and sampling issues. Section 3.6 discusses the research methods employed, namely the use of secondary research in the first instance, the basic questionnaire to suit BEP-NE's requirements as well as the researcher's aims on contextual data; the use of unstructured interviews as the primary data collection method and the use of observation as a supplementary method. Ethical issues are brought up in Section 3.7; and Section 3.8 summarises the Chapter.

3.2 Theoretical Orientation

Theoretical orientation is a way of looking at the world. It is not a theory per se, but a world view i.e. a perspective to look at the world. The world of the recycling industry and the recycling entrepreneur can be looked at from different perspectives. Nonetheless, the perspective chosen by the researcher in the context of this study reflects her theoretical orientation towards understanding the phenomena in question. It forms the broad underpinning of the study.

Accompanying theoretical orientation is a set of ideas, assumptions and methodological approaches that serve to guide and orientate the researcher in the examination of substantive issues (Kaplan and Manners, 1972). It guides the researcher's thoughts and reflections so that the fundamental ethnographic inquiry of 'what is really going on' can be fed by appropriate research questions. Consequently, these inform the research questions and illuminate the research problematic. It also gives a sense of direction and focus for the research process, ranging from a broad level of observation of the phenomena under investigation to the literature review and right up to the articulation of this thesis. With a theoretical orientation, the researcher is able to delineate the parameters of a research topic described as 'what is worth knowing' (Patton, 2002).

The theoretical orientation thus lies at the foundation of the research journey for this study. With it, comes a range of meta-theoretical assumptions; the assumptions of ontology and epistemology which give a frame of reference in which the nature of the recycling industry and the world of the recycling entrepreneur are assumed and may be investigated. Accordingly, it is also the basis for methodological considerations and research methods employed (Collis and Hussey, 2003) as well as for the strategies used for data collection, categorisation, description, analysis and conceptualisation of data.

However, Outhwaite (1987) noted that a world view is not self-contained and there is a range of alternatives and sometimes, competing world views. Taking Burrell and Morgan's (1979) sociological paradigms as a point of departure, the theoretical orientation for this study is discussed in two parts. The first discusses the philosophical and meta-theoretical underpinnings. The second part considers its practicalities, and positions it with the nature of the phenomenon under investigation.

3.2.1 Philosophical Underpinnings

The philosophical underpinnings of this study refer to the fundamental issues which shape the nature of reality. According to Burrell and Morgan (1979), whether they are aware or not, all social scientists bring to their

study a frame of reference which reflects a whole series of assumptions about the nature of the social world and the way in which it may be investigated. These assumptions refer to the nature of reality and the approach to gain knowledge in that reality. Thus, as Hughes (1990) puts it: *'the relevance of philosophical issues arises from the fact that every research tool or procedure is inextricably embedded in commitments to particular versions of the world and to knowing that world.....as research tools, research instruments and methods operate only within a given set of assumptions about the nature of society, and the nature of human beings, the relationship between the two and how they may be known.'* (p.11).

3.2.1.1 Ontological and Epistemological Assumptions

Assumptions of an ontological nature are premised on two main issues, namely the very essence of the phenomena under investigation i.e. the nature of being (Burrell and Morgan, 1979) and the assumptions that a particular approach to social enquiry makes about the nature of the social enquiry. The latter issue refers to our assumptions about the nature of reality (Blaikie, 1994). Guba and Lincoln (1994) thus posited that: *'the real world is assumed, then what we can know about it is how things really are and how things really work.....only those questions that relate to matters of 'real' existence and 'real' action are admissible.....others such as aesthetic or moral significance fall outside the realm of legitimate scientific inquiry'* (p. 108). Here, we are concerned about whether the reality to be investigated is external to the individual (imposing itself on the individual consciousness from external circumstances), or is simply the product of individual consciousness. In other words, we seek to investigate whether reality is an objective product or a product of individual cognition; and whether reality exists in the external world or the product of one's mind (Burrell and Morgan, 1979).

Epistemological assumptions extend the philosophical process further whilst taking the ontological assumptions into account. It is about the ways in which it is possible to gain knowledge of reality (Blaikie, 1994). Thus, epistemological assumptions about how one might begin to understand the world and communicate such understanding to fellow human beings

determines extreme positions on the issue of whether knowledge is something which can be acquired or it has to be personally experienced (Burrell and Morgan, 1979).

Ontological and epistemological assumptions have significant influences on the way in which one attempts to investigate and obtain knowledge about the social world (Burrell and Morgan, 1979). The particular methodological approach which responds to the question of 'how should we study the world' (Ozkan, 2006) influences the social scientist and relies heavily on her ontological and epistemological stances. Together, they underwrite paradigms.

The notion of paradigms has been acknowledged in different breadth and depth by scholars. Beginning with Kuhn (1970), a paradigm has been referred to as '*a set of beliefs, values, assumptions and techniques which serves as a regulatory framework of metaphysical assumptions shared by members of a given community*' (p. 175). Later, Lincoln and Guba (1985) argued that it represents a '*distillation of what we think about the world*' (p.15). They proceeded to say that it is therefore a worldview that defines for its holder the nature of the world, the individual's place in it and the range of possible relationships to that world and its parts (p. 107). Nonetheless, it is Burrell and Morgan's (1979) seminal work entitled *Sociological Paradigms and Organisational Analysis* which spurred the debate and momentum as regards the role of paradigms in the research process. This is discussed in the next sub-section.

3.2.1.2 Burrell and Morgan's Sociological Paradigms

Central to Burrell and Morgan's four paradigm framework (see Figure 3.1) is their thesis that all theories of organisation are based upon a philosophy of science and a theory of society. The first part of their thesis concerns the philosophical assumptions which underpinned different approaches to social science either implicitly or explicitly. These are assumptions of ontology, epistemology, human nature and methodology. These assumptions construct the frame of reference, mode of theorising and method of investigating for the social scientist. The second part of their thesis is

underpinned by a different set of assumptions, *viz.* those assumptions which construct the differing views of the social scientist about the nature of society. Hence, the two dimensions –

- 1) the nature of knowledge assuming an objective reality versus the assumption of a phenomenal, entirely subjective reality which the scientist arrives at through a discourse based on multiple perspectives; and
- 2) the nature of society characterised by either radical change or regulation.

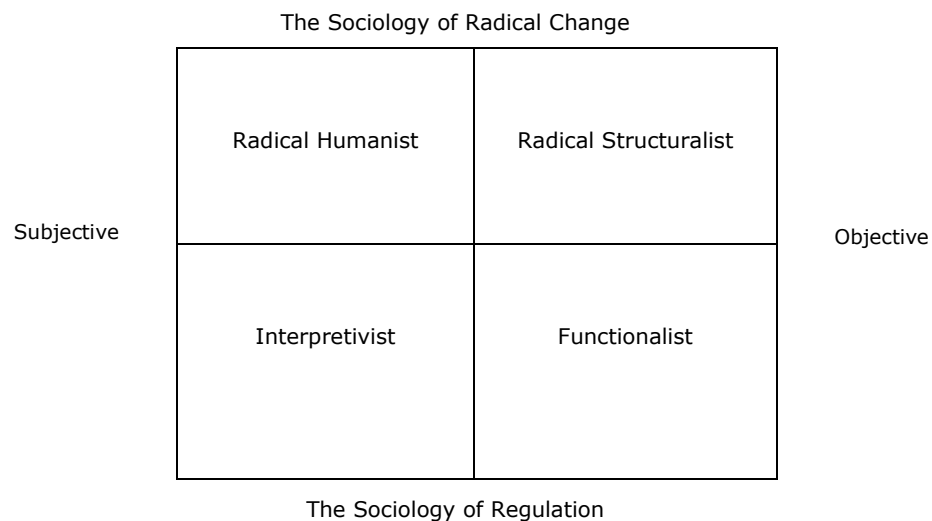


Figure 3.1: Sociological Paradigms (Source: Burrell and Morgan, 1979:22)

Thus, it may be said that underpinning philosophical assumptions and paradigms are components which fashion that frame of reference (see Section 3.2.1) and reflects the way in which the social scientist may be theoretically orientated.

Referring to Figure 3.1, both functionalists and interpretivists focus on how organisations and society is regulated and maintain social order (referring to the second dimension) which concerns status quo, social cohesion, solidarity, need satisfaction and actuality (Grant and Perren, 2002). However, functionalists take an objective view of reality whilst interpretivists take a subjective view.

Radical structuralism is rooted in a materialist view of the social world, where little distinction is made between the assumptions, aims and methods of both sciences (Burrell and Morgan, 1979: 326). It is anchored in realist ontology and portrays the functionalists' objective view (Grant and Perren, 2002). Perhaps the core difference is that functionalists do not merely attempt to understand the world but also to change it, for instance through political and economic crisis.

On the other hand, the radical humanists are typified by a subjectivist view, founded on the notion that the individual creates the world in which he or she lives. However, they focus on the essentially alienated state of man instead of understanding the nature of this process (Burrell and Morgan, 1979).

Accordingly, both radical structuralist and radical humanist are orientated toward radically changing constructed realities (Burrell and Morgan, 1979). They are thus concerned with issues related to structural conflict, modes of domination, contradictions, emancipation, deprivation and potentiality (Grant and Perren, 2002).

Functionalist Paradigm

We begin with the functionalist paradigm, the extreme position reflected in sociological positivism. This is the hard, dominant positivist view coined as 'the received view' (Guba and Lincoln, 1994). It has dominated both natural and social sciences for approximately 400 years (Bollingtoft, 2005). Further, it has been noted that within the field of entrepreneurship, the vast proportion of theory is located within the bounds of the functionalist paradigm (Grant and Perren, 2002), characterised by an objectivist perspective and rooted in regulation; therefore, resulting in the dominance of functionalism within the subject domain (Jennings *et al.*, 2005).

The functionalist paradigm represents a perspective which is firmly rooted in the sociology of regulation and approaches its subject matter with an objectivist point of view. It is rooted in the tradition of positivism and is based on a realist ontology, positivist epistemology, deterministic view of

human nature and nomothetic methodologies. It is an attempt to apply the models and methods of natural sciences to the study of human affairs. In the early years when positivism influenced the social sciences, Comte and Durkheim's sought to establish a social theory shaped by the themes of science. In Comte's *Positive Philosophy*, he described the age primarily in terms of the development of scientific reasoning which he wanted to extend to the study of society (Morrison, 1995). For Comte, the task of philosophy was to express the synthesis of scientific knowledge in which all sciences would be integrated into a single system (Hughes, 1990). This is because there is a basic unity underlying human and natural worlds (Delanty, 2005). Thus, society ought to be treated as any other field of investigation (Morrison, 1995).

Positivists take a value free stance of seeing the world. Positivism claims that the researcher is capable of studying the object without influencing it or being influenced by it. The researcher is objective and neutral, and values do not influence outcomes (Guba and Lincoln, 1994). The process is independent and eschews ethical self-reflection or personal subjective elements (Delanty, 2005). Thus, subjectivity is minimised and objectivity is achieved (Giddens, 2001). Positivist researchers set parameters as to how meaning can be made clear, how conclusions are firmly established and how research should be conducted. They are only concerned with that which can be subject to observation and verification (Delanty, 2005). Therefore, the approach is dependent on underlying patterns which humans can discover accurately. This allows an educated guess about relationships between variables. Also, by generating hypotheses, the cause and effect between variables can be determined with certainty (Delanty, 2005). Hence, their quest is to discover the 'truth' or the perceived 'real' reality which can be classified and can be fixed as classified (Gabriel, 1990). Although there may be caveats placed on this 'real' reality, it has always been assumed that it is possible to determine the extent to which reality has been described (Cohen, 1992; Cohen, 1994).

However, Giddens (2001) provided an illuminating comparison between the laboratory experiment conducted by the natural scientist and the

'sociological experiment' conducted by the social scientist. In laboratory experiments, some variables may be altered whilst others are maintained as constant. Thus, the values of the researcher are discounted or treated as neutral and do not influence the outcomes of the research (Guba and Lincoln, 1994). This enables the natural scientist to minimise subjectivity, quantify results with specific units of measurement and thus move progressively towards the central aim as the experiment continues. He or she establishes a cause and effect relationship between two variables with high levels of reliability and validity. Giddens (2001) advocated that the world of lived experience does not always correspond with the world of objective description because objectivity implies trying to explain an event or experience as separate from its contextual setting (Thompson *et al.*, 1989). It reflects the existential concern for understanding the human being in the world, where human existence is defined by the current existential context in which it occurs (Cope, 2005) and in which meaning and experience are always contextually and temporarily situated (Guba and Lincoln, 1994). Thus, scholars have been experimenting with the boundaries of interpretation, linking research to social change and a more implicit critique of the traditional worldview of science (Patton, 2002).

Reflecting on the above, the relevance of sociological positivism has been debated for two main reasons. Firstly, it could no longer be regarded as value free since the frame of reference of the scientific observer was increasingly seen as an active force which determined the way in which scientific knowledge was obtained. Secondly, it was realised that man as an actor could not be studied through the methods of natural sciences with their concern for establishing general laws. Parsons (1937) stated that an intellectual apprehension of his life and action could be attained only by speculative methods of philosophy, especially by a process of intuition of the total wholes and was illegitimate to break the process down by 'atomistic' analysis. German idealism resulted from this disenchantment, following the words of Immanuel Kant who posited that *a priori* knowledge must precede any grasp or understanding of the sense data of empirical experience and the starting point for understanding this lay in the realm of mind and intuition (Burrell and Morgan, 1979). Consequently, the

interpretive paradigm rooted in the works of Dilthey (1833-1911) and Weber (1864-1920), which represented dissatisfaction with positivism and idealism, emerged. This paradigm is discussed in the next part.

Interpretivist Paradigm

Interpretivists' stance is that the world of human affairs is cohesive, ordered and integrated (Burrell and Morgan, 1979). Stressing the notion of *Verstehen* (interpretive understanding), it highlights understanding the subjective world of human experience and social reality as an emergent and ongoing process of meaning-making. The interpretive paradigm is thus a distinctive shift along the subjective-objective dimension (see Figure 3.2). It focuses on subjectivity and social order, with nominalist ontology, anti-positivistic epistemology, a voluntarist view of human nature and ideographic methodologies.

The notion of *Verstehen* was brought into sociological thought by Dilthey's hermeneutic (interpretive) philosophy. He wanted to address the fundamental differences between natural and cultural sciences. His major contentions were:

- social phenomena of all kinds should be analysed in detail, and interpreted as texts to reveal their essential meanings and significance, which were regarded as more appropriate than a scientific search for general laws; and
- social whole cannot be understood independently of its parts and vice-versa.

He thus provided a means of organising the historical process through the intuition of total wholes. However, he was no closer to understanding the human world because he attempted investigations in terms of objective validity through *Verstehen* (Burrell and Morgan, 1979). There are no absolute starting points, no self-evident, self-contained certainties on which we can build because we always find ourselves in the middle of complex situations which we try to disentangle by making, then revising provisional assumptions (Rickman, 1976).

The notion of *Verstehen* was later consolidated by Weber, who emphasised that the essential function of social science was to be interpretive i.e. to understand the subjective meaning of social action (Burrell and Morgan, 1979). Weber's efforts appears to reconcile the advantages of *Verstehen* with the demands of scientific criteria (Hughes, 1990) and his concerns appeared to provide causal explanations of social phenomena whilst avoiding the pitfalls of reification (Burrell and Morgan, 1979). Further, Schutz (1967) noted that the reduction of all realms of objective mind to the most elementary forms of individual behaviour reflects an attempted fusion of idealist and positivist perspectives.

Despite the criticisms, Dilthey's and Weber's works provided a foundation for a mere subjectivist position in the interpretivist paradigm. In the interpretivist paradigm, researchers should understand the world as it is and seek explanation of that world from the realm of the individual or individual consciousness (Chell and Pittaway, 1998). Significant approaches within this paradigm are phenomenology, ethnomethodology and symbolic interactionism. However, it appears that the phenomenological tradition forms the basis for both ethnomethodology and symbolic interactionism. After all, both ethnomethodology and symbolic interactionism recognise that social reality is created and sustained through the use of typifications as individuals attempt to order and make sense of the world in which they live (Burrell and Morgan, 1979)

Phenomenology

Phenomenology is committed to understanding social phenomena from the actor's own perspective. The phenomenologist examines how the world is experienced. The important reality is what people perceive it to be. Essentially, phenomenology can be seen as transcendental (Husserl: 1859-1938) or existential (Schutz: 1899-1959) (Bogdan and Taylor, 1975).

In transcendental phenomenology, the notion of intentionality means an internal relation between subject and object. On the other hand, the notion of meaning construes the world as a phenomenon as pure meaning, and not as an object. Intentionality, the source of all meaning is seen as the

beginning point for the ego to shed to the empirical world (Giddens, 1993). This thereby precludes the possibility of independent reality of any kind. Reality is revealed through the act of intentionality, not constructed by consciousness (Burrell and Morgan, 1979).

Existential phenomenology shares a common focus with transcendental phenomenology on the world of everyday experience. However, it represents a sustained effort to relate the idea of phenomenology to the problems of sociology. It agrees with transcendental phenomenology's notions of intentionality and meaning. However, it focuses on the problem of inter-subjective understanding, accepts the existence of the social world in the natural attitude and is therefore principally informed by a sociological as opposed to a phenomenological perspective (Burrell and Morgan, 1979). Existential phenomenology aims for a social science that would interpret and explain human action and thought based on the descriptions of foundational structures of the reality which seems self-evident to men remaining within the natural attitude (Schutz and Luckmann, 1974).

Therefore, Schutz's central concern was with understanding the structure of meaning in everyday life and outlining its manifold relationships; the goal of which was to explicate how objects and experience are meaningfully constituted and communicated in the world of everyday life (Schutz, 1967). He stressed the constitutive nature of consciousness and interaction. Schutz (1964) had earlier argued that the social sciences should focus on the way that the life world is produced and experienced by members. He explained this in terms of stocks of knowledge and typification.

Stocks of knowledge are composed of common sense constructs of images, theories, ideas, values and attitudes which are social in origin. Meaning is derived when these are applied to aspects of experience. Stocks of knowledge are thus resources with which persons interpret experience, grasp the intentions and motivations, inter-subjective understanding and coordinate actions. On the other hand, typification is a process whereby the actor applies interpretive constructs akin to the 'ideal types' to apprehend the meanings of what people do (Burrell and Morgan, 1979). The myriad

phenomena of everyday life are subsumed under a more limited number of ostensibly shared constructs and categories, general and flexible guidelines for understanding and interpreting experience. Typification makes it possible to account for experience, rendering things or occurrences recognisable as being within a particular type of realm. Subjectivity is thus paramount as the scientific observer deals with how objects are made meaningful.

Ethnomethodology

Ethnomethodology with its disciplinary roots in sociology attempts to understand the processes by which ordinary people construct social life and make sense of it to themselves and other people (Holstein and Gubrium, 1994; Burr, 1995; Patton, 2002). Grounded in the phenomenological tradition, ethnomethodologists engage in detailed study of the world of everyday life. However, ethnomethodology seeks to treat practical activities, practical circumstances and practical sociological reasoning as topics of empirical study. It pays the most commonplace of daily life the attention usually accorded extraordinary events and seeks to learn about them in their own right (Garfinkel, 1967). Similar to existential phenomenologists, ethnomethodologists seek to understand ongoing accomplishments resulting from interactions between people. The difference lies in ethnomethodology directing attention to the context in which activities are ordered and explicated through indexicality and reflexivity (Burrell and Morgan, 1979).

Symbolic Interactionism

The notion of symbolic interactionism, built upon Mead's (1934) *Mind, Self and Society* is also grounded in the phenomenologist tradition. The thesis is that people confront the world which they must interpret in order to act, rather than experience it as a set of environmental stimuli to which they are forced to respond (Blummer, 1954). Thus, we construct our own and each other's identities through everyday encounters with each other in social interaction (Burr, 1995). Whilst the phenomenological and behavioural interactionists traditions owe their intellectual debt to Mead, they interpreted Mead's symbolic interactionism in fundamentally different ways.

Although it is not crucial to discuss these fundamental differences within the context of this study, it is useful to note that behavioural interactionists have often been attracted to positivist research methods (Burrell and Morgan, 1979)! Table 3.1 summarises the different interpretive approaches discussed above.

Theorist	Core	Commonality	Problematic
Dilthey Hermeneutic philosophy	<i>Verstehen</i> to comprehend the meaning of a historical/social/cultural artefact	To understand the subjective world of human experience	Hermeneutic circle
Weber Behavioural symbolic interactionism	<i>Verstehen</i> Causal and ideal explanations of social phenomena		Incongruent position
Husserl Transcendental phenomenology	World as a phenomenon Emphasis on intentionality and meaning	Social reality as an emergent process, an extension of human consciousness and a subjective experience	Search for transcendental isolates pure consciousness; hence no external means of validating the existence of intentionality
Schutz Existential phenomenology	The meaning of structure of everyday life Consciousness and interpretation through interactions	Meaning making Nominalist Voluntarist	Linking phenomenology and sociology
Garfinkel Ethnomethodology	Understanding the life world Sense making within actors' world	Ideographic Anti-positivist	Lacks formally stated theory and an agreed upon process
Mead Symbolic interactionism	Social order emerges through interaction How interacting selves come to agree upon certain meanings and definitions for coordinated actions		Practitioners rarely see consistently

Table 3.1: Significant Approaches in the Interpretivist Paradigm

Overall, the primary concern of these approaches is to understand the subjective experience of the individual. They share the same assumptions of ontology, epistemology and human nature. Ontologically, they are nominalist, voluntarist, ideographic and anti-positivist. Interpretivists' stance is that the world of human affairs is cohesive, ordered and integrated (Burrell and Morgan, 1979). They argue for uniqueness in human inquiry, craft various refutations of naturalistic interpretation in the social sciences, hold that mental or cultural sciences are different in kind from natural sciences, and stress that the goal of natural sciences is scientific explanation whereas the former is the grasping of understanding (*Verstehen*) of the meaning of social phenomena (Schwandt, 1994). The argument is that the outward manifestation of human life needs to be interpreted in terms of the inner experience which needs to be reflected through *Verstehen*. However, there may be a downside. Interpretivists view human behaviour as purposive (Bruner, 1990) and emphasise the uniqueness of human inquiry (Schwandt, 1994). On the other hand, the interpretivist wrestles with maintaining the opposition of subjectivity and objectivity, engagement and objectification (Hammersley, 1989). Hence, the result is a tussle to synthesise phenomenological subjectivity and scientific objectivity.

Moving away from Burrell and Morgan's four paradigm framework, the next sub-section acknowledges Guba and Lincoln's (1989) fourth generation evaluation approach. That is to say, to move beyond mere collection of facts so that the myriad of human, political, social, cultural and contextual elements are involved. The constructivist paradigm, blending both phenomenological and interpretive perspectives (Schwandt, 1994) is discussed in detail in the next sub-section.

3.2.1.3 Constructivist Paradigm

The constructivist paradigm is similar to the objectivist position because it holds that there is a real world that we experience. However, in opposition to objectivists it argues that meaning is imposed on the world by us and does not exist in the world independently of us. This acknowledges the many ways in which the world may be structured and the many meanings

for any event. Each experience is an idea and the environment of which that idea is a part becomes part of the meaning of that idea. The experience in which the idea is embedded is critical to the individual's understanding of and ability to use the idea (Duffy and Jonassen, 1992). Hence, meaning is seen as rooted in and indexed by experience (Brown *et al.*, 1989). Reality is therefore independent of human thought but meaning or knowledge is always a human construction. Within this line of thought, Lincoln and Guba (1985) proposed their constructivist paradigm as a replacement for what they labelled the conventional (positivist) paradigm of inquiry.

From another standpoint, constructivist, interpretive, naturalistic and hermeneutical inquiry appears to be founded on similar notions (Lincoln and Guba, 1985). Furthermore, constructivists and interpretivists share some common intellectual heritage. Schwandt's (1994) efforts to re-describe and re-conceptualise the salient aspects of constructivism and interpretivism signalled that in-house controversies are far more intellectually vital and exciting than the simplistic debates between so-called quantitative and qualitative methodologies. Accordingly, a comparison between constructivist and interpretivist paradigms is presented below.

Comparing Constructivist and Interpretivist Paradigms

Constructivist and interpretivist approaches have a number of similarities but differ in key ways. Table 3.2 (p. 86) summarises the similarities, boundaries and differences between constructivist and interpretivist paradigms.

According to Blummer (1969), both constructivists and interpretivists are best regarded as sensitising concepts which steer the interested reader in the general direction of where instances of a particular kind of inquiry can be found, suggesting directions along which to look rather than providing descriptions of what to see. Both share an abiding concern for the life world, for understanding meaning, for grasping the actor's definition of the situation, and for *Verstehen* by interpreting the meaning of events and phenomena through prolonged, complex processes of social interaction involving history, language and action (Schwandt, 1994).

Schwandt (1994) asserted that in essence, interpretivism bids to apply the framework of logical empiricism into human inquiry. This is interesting because Patton (2002) noted that Schwandt (2001) described logical empiricism as a moderate version of logical positivism. This may suggest that logical empiricism is rooted in Comte and Durkheim's positivism. Patton (2002) also asserted that logical empiricism seeks unity in social science through both theory formulation and methodological inquiry thus suggesting no fundamental differences between the natural and social sciences. This may also suggest that although interpretivism has hermeneutics, *Verstehen*, phenomenology and symbolic interactionism (Schwandt, 1994) (Cope, 2005) as its traditions, it may have positivism as its roots. Presumably, this does not seem impossible. After all, Weber's works which emphasised objective validity and the provision of causal explanations has played an influential role in the development of approaches within the interpretive paradigm. Thus, it may be argued that interpretivists adopt ontological realism. Whilst the constructivist may not portray the adoption of ontological realism in the same way as the interpretivist, they maintain that one need not hold an anti-realist view. One may therefore reasonably hold that concepts and ideas are invented rather than discovered, yet maintain that these inventions correspond to something in the real world (Schwandt, 1994). Bouchikhi (1993) notes that in a constructivist perspective, individuals are understood as fully competent and purposeful actors whose rationality is bounded by complex interactions with their context through time and space. This interdependency between actor and context differs from the interpretivist perspective which holds that the world exists independently. In entrepreneurship terms, this interdependency allows constructivists to synchronise chance events and prior outcomes in the entrepreneurial process (p. 560).

Yet, the particular meanings of both interpretivism and constructivism are shaped by the intent of the users. Schwandt (1994: 118) said '*...each particular persuasion offers a somewhat different conceptualisation of what we are about when we inquire into the world of social agents and historical actors...Both interpretivist and constructivist address what is the purpose*

and aim of human inquiry; and how can we know about human action in their own unique ways.'

Constructivist and Interpretivist	
Commonalities	
<p>Emanate from the criticisms in relation to positivism Emphasise <i>Verstehen</i>: meanings, interpretations, human actions Not anti-realist</p>	
Sketching the Boundaries	
<p>What is the aim of the inquiry? How can we know about human action?</p>	
Differences	
Constructivist	Interpretivist
<p>Truth is a matter of perspective constructed by the mind;</p> <p>Emphasises the instrumental and practical function of theory construction and knowing;</p> <p>Anti-essentialist;</p> <p>Interdependency between actors and context.</p>	<p>Truth is to be discovered by the mind</p> <p>Struggles to synthesise phenomenological subjectivity and scientific objectivity;</p> <p>Logical empiricism;</p> <p>The facts of the world are essentially there to study, existing independently of us.</p> <p>Objective validity;</p> <p>Essentialism;</p> <p>The world is composed of facts and the goal of knowledge is to provide a literal account of what the world is like;</p>

Table 3.2: Comparing Constructivist and Interpretivist Paradigms
 (Source: Extracted from Different Sources)

Having compared constructivist and interpretivist paradigms, the next part highlights some important points about the meaning of constructivism.

Constructivism: Philosophical Underpinnings

Constructivism, borne of Nelson Goodman's (1984) view does not hold that everything or anything is unreal. Instead, it sees the world melting into versions and versions making worlds. It inquires into what makes a version right and a world well-built (Schwandt, 1994). That is to say, world-making always starts from the world already on-hand; the making is a re-making. Yet, Schwandt went on to say that these re-makings are not simply different interpretations of the same world but literally different world versions. Stated somewhat differently, our frames of interpretation (versions) belong both to what is interpreted (the world) and a system of interpretation. They are deeply committed to the view that what we take to be objective knowledge and truth is the result of perspective created by the human mind during the construction of knowledge. Constructivists say that the mind, at the very least, forms abstractions and concepts; hence the making or construction of knowledge.

On the other hand, the constructivist says that there is no unique 'real world' that pre-exists independently of human mental activity and human symbolic language (Bruner, 1986). They emphasise the instrumental, practical function of theory construction and knowing i.e. knowledge and truth are created, not discovered by the mind. Reality is thus expressed in a variety of symbol and language systems and is shaped and stretched to fit purposeful acts of intentional human agents (Schwandt, 1994).

Goodman and Elgin (1988) proposed that we adopt a more pragmatic notion of the 'rightness', a term they see as having 'greater reach' than 'truth' and disregard the judgments of claims, interpretations, statements and versions for each 'truth'. *Rightness is defined as an act of fitting into a context, a matching or mirroring of independent reality but 'not a fitting onto'* (Schwandt, 1994, p. 126). Thus, the cognitive endeavour is not to be taken as a pursuit of knowledge that seeks to arrive at an accurate and comprehensive description of a real ready-made world. Instead, it is to be

taken as an advancement of understanding. We begin from what happens to be currently adopted then proceed to integrate and organise in order to make something right, rather than to arrive at the truth. That is to say, to construct something that works cognitively and fits together, and can implement further inquiry and invention (Goodman and Elgin, 1988). Goodman's philosophy appears to follow, at least in part, the constructivist paradigm (Lincoln and Guba, 1985), the notion of radical constructivism by Glaserfield (1992) and the notion of social constructionism (Berger and Luckmann, 1966).

Lincoln and Guba's (1985) constructivist philosophy is idealist, pluralist and relativist. It is idealist because they believe that what is real is a construction of the minds of the individuals (p. 83). It is pluralist because there are multiple and conflicting constructions which are potentially meaningful. Thus, it is also relativist because whether constructions are true is socio-historically relative. Truth is a matter of the best informed and most sophisticated construction on which there is little consensus at any given time (p. 128).

Furthermore, Guba and Lincoln (1989) elaborated the properties of constructions as follows:

- constructions are attempts to make sense of or interpret experience, and most are self-sustaining and self-renewing;
- the nature or quality of a construction that can be held depends upon the range or scope of information available to a constructor and the constructor's sophistication in dealing with that information (p. 71);
- constructions are extensively shared and some of those shared are 'disciplined constructions'. This means the collective and systematic attempts to come to a common agreement about a state of affairs for example, science (p. 71);
- although all constructions must be considered meaningful, some are rightly labelled 'malconstruction' because they are incomplete, simplistic, uninformed, internally inconsistent or derived by an inadequate methodology (p. 143);

- the judgment as to whether a given construction is malformed can be made only with reference to the paradigm out of which it operates (p. 143);
- one's constructions are challenged when one becomes aware that new information conflicts with the held construction or when one senses a lack of intellectual sophistication needed to make sense of new information.

From the above discussion, it can be said that constructivism is rooted in the individual actor's psychology (Martin and Sugarman, 1996). Furthermore, it has been a common practice to prefix 'social' to 'constructivism' or 'constructionism', which are often used interchangeably (Fletcher, 2006). As with Fletcher, the researcher has no intention to trace the philosophical roots of these ideas. Nonetheless, it is necessary to draw to the readers' attention some salient points pertaining to social constructionism which in many ways incorporates but is not limited to, the constructivist philosophy.

Social Constructionism

Social constructionist ideas emphasise subjective meaning (Fletcher, 2006), consider human agency (Martin and Sugarman, 1996) and the meaning of reality to the individual (Chell, 2000). It thus involves the idealist, pluralist and relativist philosophy underpinning the constructivism position as mentioned earlier. However, a social constructionism philosophy encompasses a broader context. Similar to constructivism, the social construction of reality is a process of sense-making (Weick, 1995) but the emphasis in social constructionism is the notion of collective and social world (Martin and Sugarman, 1996). But it is not about individual sense-making as with Lincoln and Guba (1985) and Glaserfield (1992). Human agency is not merely about individuals or groups making sense of reality. Instead, it is about collective sense-making between actors at the individual or inter-personal level (Fletcher, 2006). Reality is collectively created following the co-constructed enactment of these meanings by the social actors (Berger and Luckmann, 1966; Burr, 1995) via purposeful, directed and intentional behaviour (Chell, 2000). Reality is thus a social product

constructed cognitively by social actors via externalisation, objectification and internalisation (Berger and Luckmann, 1966). But it is also a social process whereby social constructions of meaning and knowledge are shared during human interchange (Gergen and Gergen, 1985), for example, via language (Chell, 2000; Parkinson and Howorth, 2008). The process results in a dynamic re-production of different versions of realities in different social contexts over time (Chell, 2000). It is useful to mention that whilst social construction of realities is subjective, a dominant interpretation of reality may give an objective nature to the reality in question (Chell, 2000).

The following Section probes into the nature of the research problem and argues that the social construction view is an appropriate theoretical orientation for this study.

3.2.2 Nature of the Research Problem

The research interest of this study emanated from the increasing emphasis and growing interest that society is giving to the recycling industry, business and the entrepreneur. The Government, politicians and commercial organisations have been strengthening their roles and expanding their interests. The media too has given increasing recognition to recycling businesses. Overall, recycling businesses have grown and appear to be still growing in terms of number and size (see Section 1.2). The recycling industry seems to be growing in importance. Society's perception of the industry has changed too. Instead of viewing recycling as a dirty job which deals with rubbish, it has come to be understood as a responsible act for the benefit of the environment.

Paradoxically, there is a profound lack of theory-practice integration. This issue has been highlighted in Chapter 1 (p.1) and elaborated in the literature review in Chapter 2. Academic studies in recycling have emphasised the technological aspects, policy and public participation issues; and on a smaller scale, its relationship with sustainable development. Studies about the recycling industry remain scattered and are mainly integrated with the engineering discipline.

On the other hand, the UK waste management policy context has made a significant impact on the conduciveness of entrepreneurial opportunities in the recycling sector (see Section 1.2). However, there are limited (if any) literature about the nature of the recycling industry and none attempts to understand it from an entrepreneurship perspective. In a similar manner, the academic field of entrepreneurship has limited and small scale studies and do not satisfactorily inform this scenario of increasing emphasis.

Following the above mentioned limitations in the literature, the aim of this study is to shed light on that which drives the industry to emerge the way it has and sustain the way it is today. The underlying curiosity in the research problematic is why people are driven to commit themselves to businesses which deal with rubbish or dirty, smelly and to an extent, even unhygienic things. In other words, what value so they see in the rubbish which prompts them to start and to continue the business.

Our everyday observations show the continuous and growing emphasis and importance that society is giving to the recycling industry. Looking further, one may realise how this has changed over the years. Waste handling in the past has carried negative social connotations but now, the role of the recycling entrepreneur, metal or otherwise may be termed as 'heroic'. He or she is seen as fulfilling the needs of society which are essential for environmental protection. He or she also portrays social and environmental responsibility in view of the present and future and is hence respected. Consequently, of immense interest is how and why the value attached to these entrepreneurs, businesses and the industry has changed over time.

Referring to the above, it may be argued that the scope of the study has to address two areas. The first is process i.e. the entrepreneur and entrepreneurship phenomenon. This refers to the behaviour, decision making processes and enactment of the recycling entrepreneur. The second is the context. Since the recycling industry operates in a context which changes over time, it is thus important to also account for social, economic and historical contexts in which the recycling industry operates.

Consequently, the present quest is to understand what is really going on in the recycling industry is to locate the recycling entrepreneur in his or her context. This is not merely inquiring into the nature of the recycling business or industry *per se*. Attention is given to consider how the value of the recycling industry, business and entrepreneur is recognised and enacted during interactive processes because this shapes and creates the characteristics and extent of the industry (see Section 2.6).

Taking the stance that entrepreneurship is the creation and extraction of value from the environment (Anderson, 1998), the entrepreneur and the entrepreneurial process are therefore aspects of the same phenomenon which cannot be separated from the context in which they operate (Chell, 2000). Thus, a re-visit to the main research question 'how well does entrepreneurship explain the recycling industry' suggests that the key to addressing it is to locate the recycling entrepreneur in his or her context and attempt to understand how he or she thinks and acts in that context. In other words, the 'value' he or she sees in the rubbish, what the business means to him or her, how these thoughts manifest, his or her behaviour, decisions and aspirations. Yet, as pointed out by Anderson (1998), value is a constructed subjective perception not limited to financial profits and integral to the entrepreneurial process which is embedded in a social context (Aldrich and Zimmer, 1986; Jack and Anderson, 2002). Further, for Walley and Taylor (2002) and Taylor and Walley (2004), it involves interaction with the context. Thus, like Gummesson (2005), this is an attempt to understand a systemic whole involving a context with individual and complex patterns of interactive relationships.

Following the above, the criteria for selecting an appropriate theoretical orientation are:

- it needs to satisfactorily accord sufficient importance to both process and context;
- it needs to allow the researcher to consider how different forms of value recognition (thereby creating changes in value frames or value shifts about the recycling industry, business and entrepreneurs) are achieved during interactions; and

- it needs to inspire the intellectual space for sensitising concepts to suggest directions along which to look (Blummer, 1969), rather than providing descriptions of what to see (Schwandt, 1994).

The nature of the inquiry in this study reflects the researcher's phenomenological desire to understand the conception and evolution of the entrepreneurship phenomenon which drives the recycling entrepreneur's orientation and enactment. In simpler terms, this means the recycling entrepreneur's entrepreneurial experience. To ground this study using the positivist orientation suggests that the researcher uses predictive knowledge through the construction of generalisable laws that remain 'true' across time and space (Cope, 2005). Yet, this is not a quest to look for a single and precise description of his experience or meaning which it may entail (Burr, 1995). As with Cope (2005), at the most basic level, the present quest is to understand the subjective nature of these entrepreneurs' experience and to capture the meaning of their behaviour. Hence, it is neither convincing to draw the parameters of what to see, or what not to see.

To illuminate the question of how well entrepreneurship explains the recycling industry, the researcher needs to understand and discern the subjective nature of the recycling entrepreneurs whose lives are bounded by a reality which has meaning for them (Hughes, 1990), their experience (Cope, 2005) and to capture the meaning of their behaviour. This is what Patton (2002) describes as 'what they experience and how is it that they experience what they experience'. Therefore, the theoretical orientation for this study needs to allow the researcher to understand and discern the recycling entrepreneur's orientation, enactment and surrounding artefacts. This requires more than a mere observation of the external reality or understanding a relationship of material things (Guba and Lincoln, 1994). The researcher needs to attempt to see things from that person's point of view (Bogdan and Taylor, 1975). The subjects studied cannot be reduced to simple elements. Neither does a mere attempt to establish causality based on fundamental laws as in the case of positivist view suffice.

This study responds to the calls for greater paradigmatic experimentation, engagement and debate, to move beyond the single 'paradigmatic cage' dominated by objectivist functionalist approaches and follows the tradition laid out by the ontological interpretivists in entrepreneurship studies. Examples are Bouchikhi (1993), Costello (1996), Hines and Thorpe (1995) and Johannisson (1996). As Gartner and Birley (2002) emphasised: '*the numbers do not seem to add up to what would seem a coherent story of what we believe to be the nature of entrepreneurship, as experienced*' (p. 388).

It is suggested thus that the three main concerns of the study are:

- the increasing importance that society is giving to the recycling industry;
- the change in value frames given to the historically perceived lowest of the society to the currently perceived responsible and necessary role of the recycling entrepreneur; and
- the need to accord satisfactory importance to both process and context.

With these in place, the theoretical orientation needs to allow the researcher to understand at a deeper level the particular phenomenon, for instance the entrepreneur's interactions with the context, the form of value recognition or the value shifts that takes place (Cope, 2005). Thus, it is again highlighted that positivist orientation which reduces the subjects studied to simple elements and establishes causality based on fundamental laws is seen as untenable for a study rooted in this sort of phenomenological inquiry (Cope, 2005). On the other hand, social construction is about the processes in which individuals and/ or groups create their reality and makes sense of it (Chell, 2000). Therefore, it can be argued that the social construction view is an appropriate conceptual lens which can usefully orient the researcher to understand and explain the phenomenon of entrepreneurship in the recycling industry.

3.3 Qualitative Inquiry

Following Section 3.2, this study is rooted in an interpretive ontology, constructivist epistemology and adopts the social construction view as theoretical orientation. Here, the world is socially constructed with multiple

natures of realities and can only be understood through human experience which is historically and culturally embedded (Gergen, 1985, Burr, 1995; Chell, 2000). Re-visiting Chell (2000), the entrepreneur and the entrepreneurship process are aspects of the same phenomenon which cannot be separated from the context in which he or she operates. For the purposes of this research, context encompasses environmental, cultural and spatial context in which the recycling entrepreneur operates. The attempt to understand the value shifts attached to the recycling industry, business and entrepreneur must thus consider context, process and human interchange. Whilst both context and process are inseparable in an attempt to understand and discern what is really going on in the recycling industry, both context and process data also complement each other. Context data provides the breadth of the phenomenon under investigation, whilst process data provides the depth.

Referring to the research questions (see Section 2.6), the focus of this study is the recycling entrepreneur's social construction processes within the context of his recycling entrepreneurial experience. Furthermore, the changes in the way the recycling entrepreneur perceives value attached to the recycling industry, the recycling business and him or herself as a recycling entrepreneur emanates from this. Accordingly, the researcher needs to understand the recycling entrepreneur's enactment which gives meaning to his construction and re-constructions of the value recognised and enacted through human interchange. Meanings are subjective, varied, multiple, negotiated historically and culturally and formed through interactions with others. There is thus a need to look for complexity of views rather than narrow the meanings into a few categories or ideas (Creswell, 2007).

The heart of the present inquiry lies in the changes and transformations relating to the increasing interest and growing popularity of the recycling industry from an entrepreneurship perspective. It encompasses the recycling entrepreneurs' recognition, orientation and enactment during interactive processes. This entails understanding and discerning the entrepreneurship phenomenon (the recycling entrepreneur and the

entrepreneurship process) and the context in which he or she operates. Accordingly, the demands of the data required are high in breadth and in depth. This is not unexpected, since a constructivist stance is far from the *'easy way out' that the 'undisciplined, lazy, ignorant or incompetent inquirers might choose..'* and acknowledged as *'so heavy that anxiety and fatigue are the constructivist's most constant companions'* (Guba and Lincoln, 1989, p. 183).

As realities become constructed, re-constructed and enacted, the recycling entrepreneur's sense-making process is ongoing. Consequently, the methodology and methods employed have a twofold significance. Firstly, the research has to rely as much as possible on the participants' view of situations (Creswell, 2007). Secondly, there needs to be an intimate relationship between the researcher and what is studied and the situational constraints that shape the inquiry (Denzin and Lincoln, 1994). This necessitates the researcher's passionate voice as a participant of the research process (Guba and Lincoln, 1994). The researcher uses herself as the primary data gathering instrument with a view to grasping and evaluating the meaning of the differential interaction (Lincoln and Guba, 1985). That is to say the researcher does not use other humans to gather the data. Instead, she immerses herself in the setting, speaks with the informants and encourages them to share their innermost feelings and experiences.

Further, her role must also be that of a facilitator, actively engaged in facilitating the 'multivoice' reconstruction of her constructions and those of the informants (Guba and Lincoln, 1994). As both participant and facilitator, the researcher also becomes a bricoleur (Denzin and Lincoln, 1994), that is she deploys all appropriate strategies, methods and empirical materials at hand (Becker, 1998). Therefore, the choice of research practice is not set in advance, but allows the research setting to occur naturally. Instead, it depended upon the questions that are asked and the questions depend on what is available and can be done by the researcher in that setting (Denzin and Lincoln, 1994). This is especially true when we consider the need to understand at the process level, which warrants the need to understand the

personal experiences of the recycling entrepreneur. It concerns the value he or she holds and experiences which impact him or her such that it affects the way he or she holds and perceives value. Depending on the background of the informant, gathering data on these issues would require different levels of building rapport.

The constructivist nature of this study and the resulting research theme and questions have inevitably spelt out the need for qualitative data. The characteristics of multiple realities, ongoing constructions and reconstructions; the need for a phenomenological approach in the inquiry requires in-depth understanding of social phenomena, involving subjectivity and lived experiences. Realities are wholes that cannot be understood in isolation from their contexts. Neither can they be fragmented for a separate study of the parts because of the belief that the very act of observation influences what is seen (Lincoln and Guba, 1985). As mentioned earlier, the researcher needs to immerse herself in the study. Becoming immersed in a study requires passion: passion for people, passion for communication, and passion for understanding people, which are contributions of qualitative research (Janesick, 1994). Pure quantitative data would not fulfil these requirements (Silverman, 2000). Qualitative research emphasises analysis of words and images rather than numbers; naturally occurring data in natural settings; interpretation of phenomena in terms of meanings rather than behaviour; and inductive, hypothesis generating research rather than hypothesis testing (Creswell, 2007; Denzin and Lincoln, 2000; Hammersley, 1992; Glaser and Strauss, 1967).

Furthermore, qualitative methods are more adaptable to dealing with multiple realities. The nature of the transaction between the researcher and the informant is more exposed. They are more sensitive and adaptable to the mutually shaping influences and value patterns that may be encountered. According to Patton (2002), qualitative data is collected via in-depth inquiry, observations that yield detailed and 'thick' description, interviews that capture direct quotations about people's experiences and perspectives and the careful review of texts.

The nature of issues under consideration for this study, spelt out by the significance of context and process, coupled with human interchange which embodies the shift in value frames over time mandates the requirements of a qualitative inquiry. Therefore, a research design founded on qualitative inquiry has been applied in the present research. This encompasses the development of a research strategy prior to the fieldwork, making a decision on data collection methods, guidance during the fieldwork and sense-making of the data. The following sub-sections are dedicated to these issues.

3.4 Research Strategy

Reasonable first steps to be undertaken then were aimed to create a network of contacts, both virtual and in-person, that can provide a 'feel' for the industry in Scotland. Websites, newsletters, magazines, circulars and other forms of media enabled a basic understanding of recycling practices. Nonetheless, these sources emphasise policy aspects, public concerns, public practices and the criticality of recycling for environmental benefits. They provided a basic understanding of recycling practices and the general involvement of society, rather than an insight into the recycling industry. Furthermore, although attending conferences and sharing this research interest often resulted in interested and encouraging nods, no further relevant information was uncovered. Perhaps, the most useful information pertaining to recycling business was the possible diversification of Before-RB1 into recycling. In his reply to my letter enquiring about the diversification, Mr Ken McDonald, the Development Director of Before-RB1 wrote:

'We, at Before-RB1 are particularly motivated in reviewing opportunities in this sector, not least due to our significant land holding (32,000 acres) complete with railheads and areas of hard standing, weighbridges etc., capable of handling waste and recyclate.'

He described the remanufacturing of recyclate as an exciting and emerging sector and acknowledged its possible contribution to economic development

opportunities related to the Green Jobs Strategy. However, a subsequent informal meeting with Mr David Morrison, the Development Manager for the recycling division confirmed that the company was merely at its planning and applications stages, and would not be expected to operate fully in the near future. Nonetheless, the communications with Ken and David acquainted the researcher to the impact of perceived opportunities and financing abilities on potential and current recycling entrepreneurs. To a certain extent, this added to the researcher's curiosity about the opportunity recognition processes and their associated context which instigated the start and continuance of a recycling business.

The next step was to find ways to enable access to the recycling entrepreneurs. This meant creating a database of possible recycling businesses by searching various sources of information (Section 3.6.1). The result was a reasonably informed database showing that most recycling businesses in Scotland are based in the south of Aberdeen and the majority recycling businesses in the UK are based in England. Although an indication of the type of recycling activity, recyclables used and the recycled product is provided in some of the businesses' websites there was limited information about the individual recycling business. Since neither reliable recommendations nor publications providing sufficient details about local businesses involved in recycling could be obtained in order to support sampling at this stage, a two-part strategy was employed. First of all, the researcher made telephone calls to businesses in the augmented database to identify appropriate informants for the study. At the same time, relevant bodies were contacted in order to find out whether there were any upcoming projects which would allow liaison with the founder, owner or employees of recycling businesses and welcome the researcher's involvement. This was carried out with hopes that it would help streamline the fieldwork and thus effectively expedite the research process. WRAP, Aberdeen City Council and Scottish Enterprise Grampian were targeted in a first instance. WRAP provided no reply. Whilst Aberdeen City Council replied that there were no anticipated projects, they highlighted that new legislation relating to end-of-life-vehicles (ELVs), waste electronic and

electrical equipments and hazardous waste would be a major barrier to potential entrants.

However, the email sent to the Scottish Enterprise Grampian made a major difference to the flow of the present study. The email was forwarded to the Business Environment Partnership-North East (BEP-NE), a not-for-profit organisation which engaged in the recognition and promotion of cost-savings through environmental improvement amongst businesses in the North East of Scotland. Indeed, it was by sheer luck that Scottish Enterprise had known about BEP-NE's involvement in projects with recycling businesses the North East of Scotland. At that time, BEP-NE was aiming to run a project to supplement the work on the sustainable management of waste from business and public sector organisations in Scotland carried out by the Scottish Executive and Scottish Environment Protection Agency (SEPA). The project was part of BEP-NE's Green Industries Initiative which includes *inter alia* the identification and development of local waste reprocessing opportunities in the North East of Scotland. Additionally, it was hoped that the project would stimulate efforts and support the development of the local business recycling infrastructure.

3.4.1 Collaborations with Business Environmental Partnership-North East (BEP-NE) : Blending Objectives

The Business Environmental Partnership-North East (BEP-NE)'s objectives was to provide a strategic baseline assessment of business waste processing capacity in the North East of Scotland. Consequently, basic information pertaining to the names of companies engaged in waste processing activities, their lead contacts, geographical distribution, site addresses, number of employees and types of waste reprocessing activities⁶ that they are engaged in were of interest to them as a basis to explore the opportunities and barriers in the waste processing industry in the North East of Scotland. The researcher very quickly recognized that this information when acquired would not merely serve BEP-NE's interests but would also

⁶ Types of licence and permits held, and waste processing capacity were also included in BEP-NE's interests. The researcher has attempted to include these as part of the data collection process but they are exclusively for BEP-NE's use and not the present research.

provide a foundation for the fieldwork in the present study. Meetings were held between the researcher and the BEP-NE team to clarify the objectives and interests of both parties and discuss the ways in which they would complement each other and map alternative strategies. The outcome of is summarised in Figure 3.2.

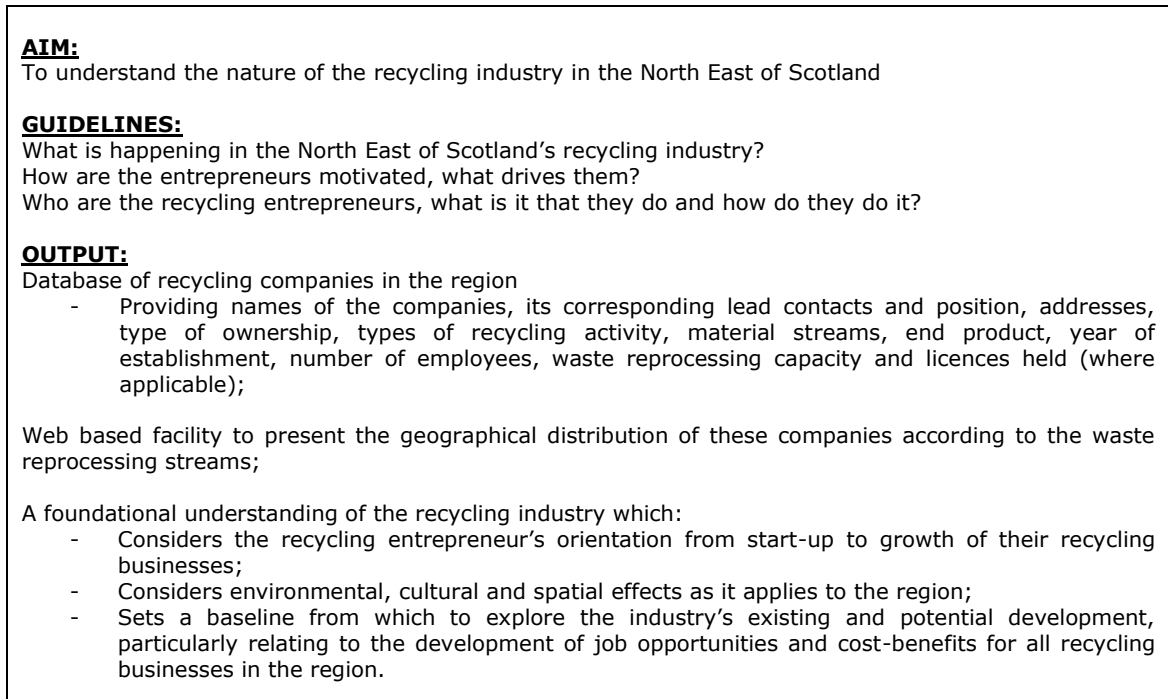


Figure 3.2: Blending Objectives

3.5 Research Design

This Section highlights the use of multiple methods during fieldwork, the sampling issues and the development of a sampling framework for the study. An introduction to the informants is also provided.

3.5.1 Use of Multiple Methods

The use of multiple methods or triangulation reflects the quest for an in-depth understanding of the phenomenon in question. Objective reality can never be captured. Triangulation is not a tool or a strategy of validation but an alternative to validation (Denzin 1989; Fielding and Fielding, 1986; Flick, 1992). This adds rigour, breadth and depth to any investigation (Flick,

1992). The present study is informed by a qualitative tradition and uses social construction as conceptual lens to understand the recycling entrepreneur's entrepreneurial experience with a focus on value shifts over time (Lincoln and Guba, 1985; Patton, 2002).

Consequently, the research design comprises multiple methods with fieldwork procedures centred on unstructured interviews as the core. With the study's phenomenological stance, unstructured interviews allow the researcher to 'venture' into other modes of inquiry so that elements of story telling and life history help to inform the interviews. On the other hand, noting that not all knowledge is articulable, recountable or constructable in an interview (Masson, 2002), observations were used to complement the unstructured interviews during the field research.

In adopting multiple methods, the researcher is careful not to adopt the naively 'optimistic' view that the aggregation of data from different sources will unproblematically add up to produce a more complete picture (Hammersley and Atkinson, 1983). The aim here is thus, not to reveal the 'whole picture' (Silverman, 2000) but as a strategy to add rigour, breadth and depth to the investigation (Flick, 1992).

3.5.2 Sampling

In constructing the sampling framework, Denzin's (1987, p. 136-7) advice is adopted, i.e. *'decide what you want to know, about whom do you want to know and what is it you want to know, bearing in mind that it is perfectly legitimate to select any population as the object of your study'*. Referring to the nature of issues to be investigated in this study, two core categories of data need to be sought. They are data which informs the context (context data); and data which informs the process (process data). Accordingly, sample selection is also divided into sample for context data and sample for process data.

At this juncture, it is useful to highlight that purposive sampling has been employed as the overarching sampling strategy in the research design. The sampling framework adopted in the research design is thus guided by the

researcher's purposive sampling strategy i.e. the identification of informants who can potentially provide useful insights into the research questions and thus generate an understanding of the recycling industry from an entrepreneurship perspective. However, there are also subsidiary sampling strategies which have been incorporated in selecting the samples which complement purposive sampling (consensus sampling, convenience or availability sampling and snowball sampling). A purposive sampling framework (Figure 3.3, p. 106) developed as part of the research design is used in selecting the relevant samples to generate understanding of context and process.

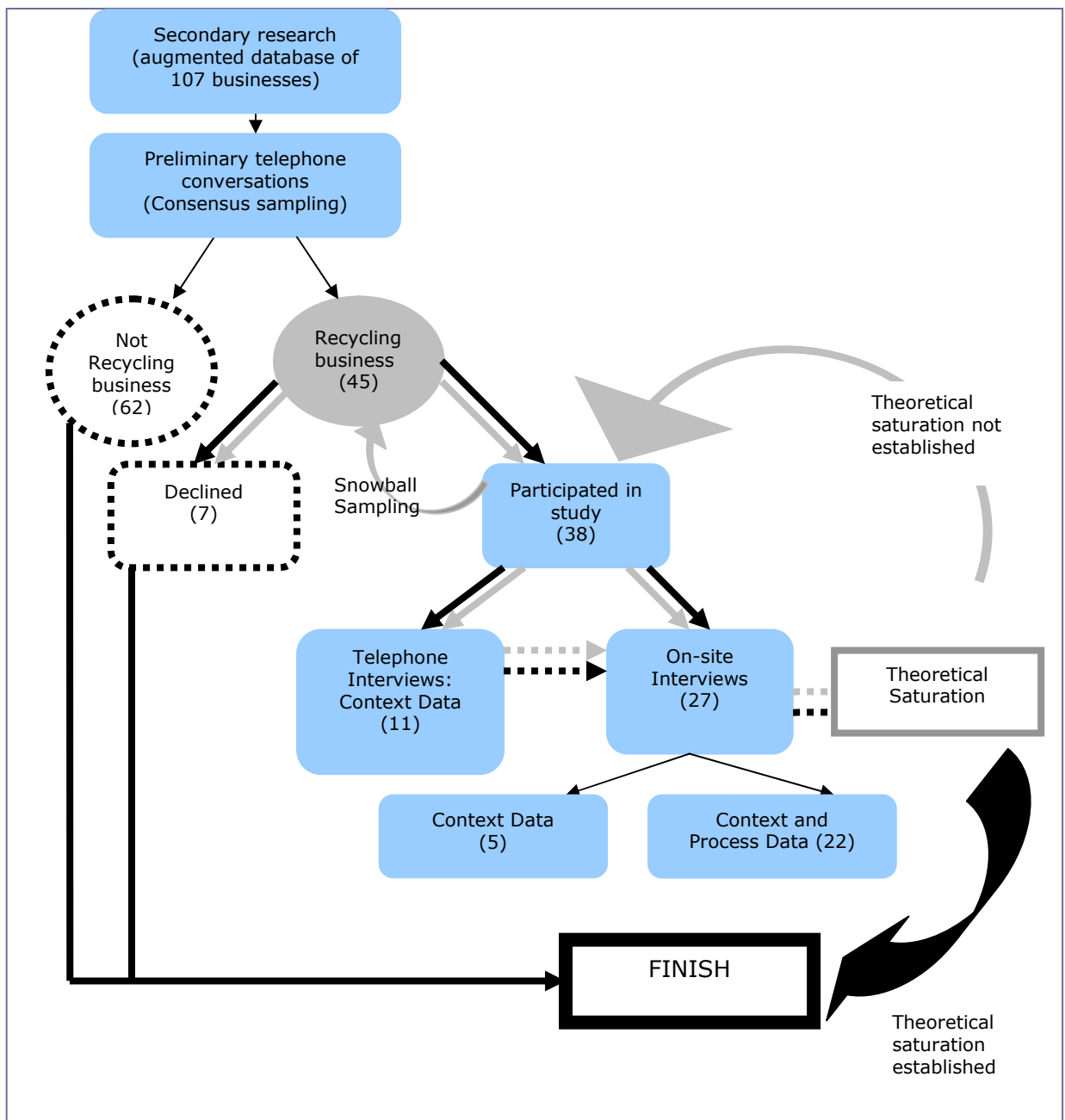


Figure 3.3: The Purposive Sampling Framework (Source: Author)

Whilst the researcher was clear as regards the type of data which fit the research interests, the identification of appropriate informants presented an issue which needed to be resolved before data collection could proceed. This is because there is no reliable directory which represents the total population of recycling businesses in the North East of Scotland. On the contrary, the individual sources for the lists of recycling businesses (see Section 3.6.1) merely provided a small proportion of its population. In order

to derive the most reliable figurative representation of the population of recycling businesses in the region, the researcher developed an augmented database which comprised all the businesses listed by each source. The augmented database totaled to 107 businesses.

To assist in articulating the procedures involved in the sample selection until theoretical saturation (Glaser and Strauss, 1967) is satisfactorily established, the Purposive Sampling Framework is divided into three key phases (Table 3.3) which will be elaborated in detail in the following sub-sections.

Key Phases	Description
Phase One	Determining the recycling businesses
Phase Two	Identifying the 'fit-for-purpose' informant
Phase Three	Establishing theoretical saturation

Table 3.3: Key Phases Incorporated in the Purposive Sampling Framework
(Source: Author)

3.5.2.1 Phase One: Determining the Recycling Businesses

Recycling businesses that are relevant for this study are those businesses:

- Whose primary business activity is waste reclamation; and
- Which are located in the North East of Scotland; and
- Does not include those which are engaged in informal waste reprocessing, as this category of businesses is outside the scope of this study which is to understand the changes and transformations in the recycling industry.

To avoid bias, consensus sampling was applied to establish which of the 107⁷ businesses are recycling businesses for the purposes of this study. Telephone calls were made to all the 107 businesses and it was found that 62 of the businesses in the database (58%) were not recycling businesses for the purposes of this study. The reasons are as follows:

- Quite often the sources used to compile the augmented database do not categorise recycling businesses as a category by itself, but rather, as waste management companies which may but not necessarily have waste reclamation as their primary business activity;
- The augmented database includes charity shops which are engaged in the reuse of products but not waste reclamation as their primary business activity;
- Some of the sources (Section 3.6.1) were not up-to-date and included recycling businesses that have closed down or merged with a larger business;
- Some are involved in the collection or transport of recyclables but not in the business of recycling or reprocessing waste materials which add value to the waste reclamation process;
- Some of them were engaged in informal waste reprocessing;
- Some mis-information can occur in the sources which the researcher used to compile the database. Firstly, it may be a telephone number which was registered for the purposes of a recycling campaign. Secondly, the sources may list an existing parent company whose primary business activity does not relate to recycling in any way. However, there was an intention to set up a recycling business in the next 6 months outside in Perth which is outside the North East of Scotland. Thirdly, the businesses may be existing recycling businesses but they are in fact, not located in the North East of Scotland.

⁷ It is useful to mention that the total of 107 comprised the compilation of possible recycling businesses from all the sources listed in Section 3.6.1 and the snowball samples when theoretical sampling came into play.

3.5.2.2 Phase Two: Identifying the 'Fit-for-Purpose' Informant

Due to the unavailability of sources to provide reliable information of the numbers, sizes and materials handled by the recycling industry in the North East of Scotland, it became necessary to collect context data which also encompassed (but not exclusively) data to inform the background of the study context. Specifically, this refers to the basic information required by BEP-NE to make a strategic baseline assessment of waste reprocessing activities in the North East of Scotland (see Section 3.4.1). It also includes data which spell out the social, political, economic and cultural contexts in which the recycling industry operates. In other words, data which generate understanding for the research question 'what is the nature of the recycling industry?' At this level, the researcher is not interested in drawing conclusions about the recycling industry from an entrepreneurship perspective. The prime concern is about the breadth of information concerning the industry rather than a good sampling strategy. For this reason, sample selection is not merely governed by purposive sampling (Patton, 1990) to generate contextual understanding. It also incorporates a convenience or accidental or availability sampling (Babbie, 1998; Mutchnick and Berg, 1996; Dixon, 1987). In other words, the researcher relied on the available and easily accessible subjects.

On the other hand, process data is data relating to the recycling entrepreneur's entrepreneurial experience and his or her interactions with the context. Sample selection in this instance is aimed at generating understandings into the other two research questions: 'what is the nature of the recycling entrepreneur's behaviour, motivation, decision and action?' and 'how are values recognised and enacted during interactive processes?' The central criteria for the selection of individuals and sites for this study are to purposefully inform an understanding of the research problem and central phenomenon in the study (Creswell, 2007).

Phase Two is thus focused on identifying samples which can purposefully fulfil the requirements of both context and process data as discussed above. Firstly, the 62 businesses identified as not recycling businesses in Phase One were disregarded. Secondly, theoretical sampling began by targeting

the five recommendations by the BEP-NE team based on their perception of the businesses' development and owner-managers' behaviour as the first five businesses which would likely generate relevant understanding to the research questions. Thirdly, the evenings and weekends 'drive-bys' (see Section 1.3) supported the different levels of the researcher's 'immersion' (Lincoln and Guba, 1985) into the natural setting and enriched her observation of the surrounding artefacts (see Section 3.6.4.), and assisted in prioritising which of the remaining 45 (42%) businesses to be contacted.

Whilst the researcher successfully spoke to either the owner or the representative of the owner in each of these recycling businesses, the eventual sample selection did not comprise informants from all the 45 businesses. 7 (16%) of the recycling businesses were screened out and excluded because they could not serve the purposes of the fieldwork due to one or more of the following reasons:

- refused access with an outright decline by the owner manager of the recycling business;
- refused access with a gradual decline. For example, when the researcher was asked to call at a specific time and had done so five times but failed to speak with the owner manager or other relevant person; or
- it was extremely difficult to build a rapport with the owner manager during the telephone conversation.

This means that the informants for both context and process data are from the remaining 38 (84%) recycling businesses. 11 of the informants from the 38 businesses were only willing to provide the basic contextual information. Thus, semi-structured telephone interviews based on the basic questionnaire (Section 3.6.2) were conducted with them. These samples were conveniently selected following the preliminary telephone conversations. But they were also purposive because the prime objective was to encourage a more accurate picture of the background and characteristics of the recycling industry in the North East of Scotland via a larger representation of samples for context data. It should also be mentioned that 2 of the informants who initially agreed to provide only the basic information changed their minds at the close of the telephone

interviews following rapport building. As a result, the researcher was invited for on-site in-depth interviewing with them.

On-site in-depth interviewing was conducted with the remaining 27 out of the 38 businesses where both process and context data were collected. This comprised 71% of the recycling businesses who agreed to participate in the study, either by contributing to context data or both context and process data. Collection of context data in this instance is incorporated into a basic questionnaire which is brought along during on-site visits where unstructured interviews (Section 3.6.3) and observations (Section 3.6.4) are carried out. These were the people who:

- indicated an interest to participate in the study during the preliminary telephone conversation;
- were enthusiastic for the researcher to have an on-site visit in order to understand their recycling business activities and operations; or
- came across as potentially relevant informants who can assist in generating understanding of the research issues to be addressed.

It should also be noted that 5 of them were recommended by the BEP-NE team based on their knowledge of the development of the businesses and their perception of the entrepreneurs of those businesses. The 27 businesses also included the 2 with whom the researcher successfully built a good rapport during the telephone interviews mentioned above.

This structured and organised approach in developing the sample selection by screening out unsuitable informants and negotiating access with potential informants adhered to Creswell's (2007) recommendation to identify samples at one or more levels comprising site, event, process and participant levels. The demographics involved in the sample of recycling businesses for context and process data for the purposes of this study is summarised in Table 3.4.

Work Done	Type of Data	Recycling Businesses	
		Number	Percentage (%)
On-site visit: Unstructured interview Observations Basic questionnaire	Context and Process Data	22	49
	Context Data Only	5	11
Telephone interview: Basic questionnaire	Context Data Only	11	24
Preliminary telephone conversation	Not Applicable (Unsuitable)	7	16
Total		45	100

Table 3.4: Sample of the Recycling Businesses

It is useful to note that informants in 5 of the recycling businesses visited merely contributed to the collection of context data. 4 of them are not entrepreneurs (See Section 5.1). Whilst the remaining one was highly enthusiastic about the researcher's on-site visit, he was not keen at all to engage in the research area. His speech continuously diverted to his negative opinions about the general community and family members, none which were related to the recycling context or entrepreneurship. As a result, the researcher had to consider the in-depth interview as 'spoilt'; she nonetheless managed to 'squeeze' the data required in the basic questionnaire from him.

On the other hand, it is important to mention that the researcher's on-site visit resulted in interviewing more than 1 informant in some instances. In 3 of the recycling businesses visited, there were two recycling entrepreneurs who were present and wanted to participate in the interviews. There were also 2 non-entrepreneur informants from 2 other recycling businesses who were prepared to participate in the study. Therefore, whilst on-site visits were made to 27 recycling businesses, 32 informants participated in the interviews. 25 of the informants are recycling entrepreneurs. 6 of the informants merely regarded their position in the recycling businesses as

that of employee with a specific job scope, while 1 of the in-depth interviews was spoilt (see the above paragraph). Table 3.5 summarises this point.

Type of Data	No. of Recycling Business	No. of Informants
Context and Process Data	22	25
Context Data Only	5	7
Total	27	32

Table 3.5: Different Sample Size of Recycling Businesses and Informants

An Introduction to the Informants

Following the on-site visits, a summary of the informants' background and waste materials that they handle is depicted in Table 3.6. The names of all the informants have been disguised to protect their identity and anonymity as some of the data gathered involved their personal views (Jack, 2002) and experiences. Since all the informants were local people, the researcher made an Internet search for 'Scottish names' in a first instance. The eventual selection of the pseudonyms was guided by the first letter in the actual name of the informant to aid the researcher's memory.⁸

Table 3.6: The Informants

Informant	Previous Work Experience	Years	Position	Recyclables Handled	Other Current Business
Context and Process Data					
Bean	Employee of same company	32	Director -Owner	Non ferrous metal Other scrap metal End of life vehicles Machineries	None

⁸ The actual names of the informants' recycling businesses are disguised using the acronym 'RB' and according to the order of on-site visits conducted, and the specific brands of recycled products are also disguised as and when they appear in this thesis.

Table 3.6: The Informants (Continued)

Informant	Previous Work Experience	Years	Position	Recyclables Handled	Other Current Business
Context and Process Data					
Beathas	Nurse	16	Director -Owner	Waste oil IBCs	None
Beiste	Management consultant Relationship manager	2	Director - Owner	Toners Ink cartridges	None
Brody	Offshore industry Self-employed	8	Director -Owner	Lead pipe protectors	Manufacturer of lead pipe protectors
Carlton	chain boy junior civil engineer self employed -plant hire -civil engineering and quarrying -builders' merchants -farming	10	Director	Tyres End of life vehicles	None
Daracha	Carer Driver	6	Project Coordinator	Paper Cardboard Aluminium cans Plastic bottles Plastic sheets	None
Farlane	Textile industry Varied self-employment	5 2	Director -Owner	Soap powder- end material cooking oil	None
Forbes	Social work	12	Project Coordinator	Aluminium cans Plastic bottles	None
Garry	Air force Environmental audit	9	General Manager	Multiple waste (IWMC)	None
Gilmore	Self employed -winter oriented business -garden bark business	4	Director -Owner	Green waste	None
Gilmat	Self employed -building merchant	5	Director -Owner	Construction waste	building merchant

Table 3.6: The Informants (continued)

Informant	Previous Work Experience	Years	Position	Recyclables Handled	Other Current Business
Context and Process Data					
Henderson	Self employed -haulage -wood chopping	5	Director -Owner	Pallets Green waste	haulage
Iver	Offshore industry	10	Director -Owner	Pallets	None
Jamie	Self employed -waste equipment business	2	Director -Owner	Plastic	variety: industrial cleaning and waste disposal storage services human resources service
Jock	Self employed -vehicle servicing	15	Director -Owner	Glass Aluminium cans Paper Cardboard	vehicle servicing
Kamden	Joiner Day Centre Officer	7	General Manager	Wood	None
Kyrk	Farming	0.5	Director	Construction waste Green waste Wood Metal	farming
Phyfe	Accountant	17	Director -Owner	End of life vehicles other scrap metal non ferrous metal lead acid batteries tyres	None
Ramsey	Consultant in Japanese pipe trading company	11	Director -Owner	Lead pipe protectors	consultant for Japanese pipe trading company
Renaldie	Bank in Argentina	2	Director -Owner	Toner Ink cartridges	None

Table 3.6: The Informants (continued)

Informant	Previous Work Experience	Years	Position	Recyclables Handled	Other Current Business
Context an Process Data					
Sima	Grampian Country Food Group	0.5	Director	Construction waste Green waste Wood Metal	food consultancy
Skene	Diving industry	10	Director -Owner	Pallets	None
Struan	Music shop Nursing home Fishery	1.5	General Manager	Toner Ink cartridges	None
Sutherland	Farming Haulage company	11	Director -Owner	Construction waste Green waste Wood Metal Paper Cardboard	None
Tavion	Army Voluntary work - Scottish Children Panel System	8	Project Manager	Desktop Scanner Laptop Printer	None
Context Data Only					
Cameron	Food industry	1.5	Sales Executive	Multiple waste (IWMC)	None
Carnegie	Onsite chemical collection	10	Special Waste Manager	Multiple waste (IWMC)	None
Donald	University	2	Chemist	Multiple waste (IWMC)	None
Irvine	Offshore industry	30	Development Manager	Paper and cardboard	None
Jackson	Retail industry	1.5	Administrator	Multiple waste (IWMC)	None
Stuart	Volunteer at Garden Craft, Relief Day Centre	6	Carer	Aluminium cans Plastic bottles	None

End of Table 3.6

3.5.2.3 Phase Three: Establishing Theoretical Saturation

Phase Three of the Purposive Sampling Framework relates to fitting sampling procedures into the researcher's data analysis until she is satisfied that theoretical saturation (Glaser and Strauss, 1967) is established. This sub-section will guide the reader through the three stages. They include: firstly, analysing the data collected from the samples in Phase Two to seek conceptual categories using the constant comparison method in grounded theorising (Glaser, 1978); secondly, continuous sampling using snowballing targeted for maximum variation (Patton, 1990); and thirdly, continual re-examination until theoretical saturation is established (Glaser and Strauss, 1967).

Yin (1993) advocated that it is necessary to incorporate context in grounded theory due to the ambiguities related to boundaries of the phenomenon at the outset of the investigation. However, the purpose of context data in this study is merely to provide a background of the context to **assist** in understanding (and not to develop understanding) the recycling industry from an entrepreneurship perspective. Accordingly, the relevant data that has been analysed and purposefully sought to establish theoretical saturation is process data.

Constant Comparison and the Development of Conceptual Categories

The constant comparison method entails continuously moving back and forth comparing the different incidents within individual cases and across cases of the informants to identify patterns of commonality and explanations (Glaser and Strauss, 1967) that 'fitted' existing data (Jack, 2002) and to develop central categories (Glaser, 1978).

Due to the availability of both social and financial opportunities in the recycling industry (Section 1.2.3), the researcher sought to develop a central category which can assist in generating insights into the entrepreneurs' constructs of the recycling opportunity. She thus attempted the different types of ownership (for-profit and not-for-profit sectors) as her first provisional category. This was eventually disregarded (see Section 5.2

for details). Keeping in mind the fundamental requirement to develop insights into the entrepreneur's opportunity construction, it was found that the data was best segmented according to the entrepreneur's value orientation. In this study, the term value orientation means the entrepreneur's value perception of the recycling opportunity. Four categories of value orientation were identified *viz.* social, green, financial and entrepreneurial value orientation. These categories were identified through patterns of commonality in the entrepreneurs' motives, behaviour, decision-making and actions. They could also help in explaining those patterns. They thus work as central categories for descriptive and analytical purposes, allowing progressive focusing in continuing analysis.

However, value orientation entails more crucial implications in this particular grounded theorising process than as descriptive and analytical categories. Sorting units of data according to value orientation also means that the researcher focuses on the **movement of value orientation** during the entrepreneurial process. She uses value orientation as the unit of analysis as opposed to the business or entrepreneur, as commonly found in entrepreneurship studies. Using the recycling business as the unit of analysis is inappropriate because a recycling business may have more than one owner manager who do not share the same motives, exhibit the same behaviour, share the same values or perceive the recycling opportunity in the same way. Adopting the recycling entrepreneur as the unit of analysis may appear to be more convincing but proved to be problematic because of two reasons: firstly, a number of informants in the sample have indicated an internal change and transformation over time; and secondly, entrepreneurial practices were found to be paradoxical with entrepreneurial motives, motivations and values.

Table 3.7 summarises the segmentation of the entrepreneurs according to the value orientation categories in the order in which unstructured interviews have been conducted during the fieldwork. It shows that the first interview provided data from Iver which fits into the green value orientation category. However, it is not until the 20th interview (Garry) that the researcher identified a second informant who has a green value orientation.

Even more interesting is the fact that Garry is the General Manager (as opposed to owner manager) of the integrated waste management company (IWMC) but is nevertheless entrepreneurial in that position.

Table 3.7: Order of On-Site Visits and the Rarity of Green Value Orientation

Recycling Business ⁹	Informant	Social Value Orientation	Green Value Orientation	Financial Value Orientation	Entrepreneurial Value Orientation	Context Data Only
RB1	Iver		✓			
	Skene				✓	
RB2	Beathas			✓		
RB3	Brody			✓		
RB4	Struan	✓				
	Renaldie			✓		
RB5	Beiste	✓		✓	✓	
RB6	Irvine					✓
RB7	Sutherland				✓	
RB8	Kamden	✓				
RB9	Ramsey			✓		
RB10	Jamie				✓	
RB11	Tavion	✓				
RB12	Callum					✓
RB13	Cameron					✓
	Carnegie					✓
RB15	Phyfe				✓	

⁹ See footnote no8.

Table 3.7: Order of On-Site Visits and the Rarity of Green Value Orientation (Continued)

Recycling Business¹⁰	Informant	Social Value Orientation	Green Value Orientation	Financial Value Orientation	Entrepreneurial Value Orientation	Context Data Only
RB16	Gilmore				✓	
RB14	Jackson					✓
	Donald					✓
RB17	Farlane				✓	
RB18	Forbes	✓				
RB19	Daracha	✓				
RB20	Garry		✓			
RB21	Kyrk				✓	
	Sima				✓	
RB22	Carlton				✓	
RB23	Stuart					✓
RB24	Bean				✓	
RB25	Jock			✓		
RB26	Henderson				✓	
RB27	Gilmat			✓		

End of Table 3.7

Table 3.7 also shows that as the interviews increase there seems to be a diminishing marginal contribution (Gummesson, 1991) as no new categories are identified. At the same time, the number of informants for the social, financial and entrepreneurial value orientation seems to be well-balanced but recycling entrepreneurs with a green value orientation proved rare.

¹⁰ See footnote no. 8

After the 15th interview (Phyfe), the researcher began to use snowball sampling, asking the informants, checking with BEP-NE and the Scottish Environmental Protection Agency (SEPA) if they knew of any possible informants who might give new insights to the data analysis; and adding them to the augmented database.

Snowball Sampling Incorporating Maximum Variation

This section presents the researcher's snowball sampling incorporating maximum variation (Saunders *et al*, 2007) as a subsidiary sampling strategy to establish theoretical saturation (Glaser and Strauss, 1967) and promote validity and reliability for substantial generalisation. Bearing in mind the multi-faceted nature of the recycling industry, the researcher was careful to include a good range of variation. Table 3.8 summarises the researcher's maximum variation strategy.

Table 3.8: Maximum Variation Strategy

More Common Characteristics Identified from RB1 to RB15		Maximum Variation Strategy
Business	Ownership <ul style="list-style-type: none"> - For-profit sector: <ul style="list-style-type: none"> o Family owned o Foreign-based IWMC - Not-for-profit sector: <ul style="list-style-type: none"> o Social enterprises 	Look for different types of recycling businesses in the not-for-profit sector: <ul style="list-style-type: none"> - community enterprise - voluntary organisations
	Size: <ul style="list-style-type: none"> - micro businesses 	Look for larger size recycling businesses.
	Age and establishment: <ul style="list-style-type: none"> - 5-10 years 	Look for recycling businesses: <ul style="list-style-type: none"> - less than 5 years - more than 10 years - well-established
	Location: <ul style="list-style-type: none"> - Aberdeenshire - Aberdeen City 	Look for recycling businesses in Moray.

Table 3.8: Maximum Variation Strategy (Continued)

More Common Characteristics Identified from RB1 to RB15		Maximum Variation Strategy
Entrepreneur	Majority runs other businesses alongside the recycling business.	Look for recycling entrepreneurs whose recycling business is their sole business.
	Majority has previous entrepreneurial experience.	Look for recycling entrepreneurs who do not have any entrepreneurial experience prior to the recycling business.
Operations	Waste material stream: <ul style="list-style-type: none"> - wood - drums - waste oil - lead pipe protectors - printing ink - WEEE - plastic - metal - various combinations for IWMC 	Look for recycling businesses which handle unique waste materials: <ul style="list-style-type: none"> - green waste - soap powder - cooking oil
	Number of waste material streams: <ul style="list-style-type: none"> - single 	Look for recycling businesses which handle more than a single waste stream
	Types of operation <ul style="list-style-type: none"> - normally one level 	Look for unique combination of types of operations: <ul style="list-style-type: none"> - transfer, intermediate reprocessing and final product (for definition, see Section 4.4.1.2, p.165)
	End product <ul style="list-style-type: none"> - sorted and baled materials - feedstock for further reprocessing 	Look for recycling businesses which produce an end product for final consumer <ul style="list-style-type: none"> - compost - aggregates - bio fuel

End of Table 3.8

Continual Re-examination Using Constant Comparison Method and Establishment of Theoretical Saturation

The researcher engages in a continual re-examination of the new data from the snowball samples using the constant comparison method (Glaser, 1978) to check how these fitted into existing categories and to see if there are any new categories, new properties in existing categories and any entrepreneurs with green value orientation who was absent since the 1st on-site interview until the 20th (Garry) (p.117). Although Garry is an entrepreneurial non-

owner manager, it did not stop the researcher from continuing snowballing for maximum variation, ensuring coverage of established businesses as well as start-ups and unique recycled end product. After another 7 samples, she was convinced that no further samples would add value to her existing categories nor is likely to uncover a further recycling entrepreneur with a green value orientation. Furthermore, the 7 and 16 businesses who declined participation and merely contributed to contextual understanding respectively (thus comprising the entire population of recycling businesses identified for the purposes of this study in her augmented database) would not have made any difference to her categories and properties. This is illustrated using Table 3.9.

Table 3.9: Similar Patterns in the Characteristics of Recycling Businesses

Characteristics of Recycling Business		Unstructured Interview (22)		Basic Questionnaire (16) ¹¹		Declined (7)	
		No.	%	No.	%	No.	%
Ownership	For-profit	18	82	12	75	7	100
	Not-for-profit	4	18	4	25		
	Total	22	100	16	100	7	100
	IWMC	1	6	5	42	3	43
Size	Large	0	0	1	6		
	Small	7	32	8	50	2	29
	Micro	15	68	7	44	5	71
	Total	22	100	16	100	7	100
Location	Aberdeen City	6	27	6	37	1	14
	Aberdeenshire	12	55	7	44	5	71
	Moray	4	18	3	19	1	14
	Total	22	100	16	100	7	100

¹¹ This figure comprises the 11 telephone interviews and 5 on-site interviews in which only context data was collected

Table 3.9: Similar Patterns in the Characteristics of Recycling Businesses (Continued)

Characteristics of Recycling Business		Unstructured Interview (22)		Basic Questionnaire (16) ¹²		Declined (7)	
		No.	%	No.	%	No.	%
Type of operations	Transfer	9	26	7	44	3	43
	Intermediate Reprocessing	8	24	6	37	2	29
	Final Product	17	50	3	19	2	29
	Total	34 ¹³	100	16	100	7	100
Number of waste streams handled	Single	11	50	10	63	4	58
	Dual	5	23				
	Tri	2	9				
	Multiple	4	18	6	37	3	42
	Total	22	100	16	100	7	100
Waste material streams	Wood	3	10				
	Drums	1	3				
	Waste Oil	1	3				
	Lead pipe protectors	2	7				
	Printing ink	2	7				
	Plastic	3	10	1	6		
	Metal	3	10	5	29	2	29
	Green waste	2	7				
	Soap powder	1	3				
	Cooking oil	1	3	1	6		

¹² This figure comprises the 11 telephone interviews and 5 on-site interviews in which only context data was collected

¹³ A recycling business may be engaged in more than one type of operation.

Table 3.9: Similar Patterns in the Characteristics of Recycling Businesses (Continued)

Characteristics of Recycling Business		Unstructured Interview (22)		Basic Questionnaire (16) ¹⁴		Declined (7)	
		No.	%	No.	%	No.	%
Waste material streams (continued)	Tyre	1	3				
	Construction waste	1	3			1	14
	WEEE	1	3			1	14
	Aluminium cans	2	7	2	12		
	Paper and cardboard	1	3	2	12		
	Paint	1	3	1	1		
	Various combinations	4	14	5	29	3	43
	Total	29 ¹⁵	96 (100) ¹⁶	17	100	7	100

End of Table 3.9

Table 3.9 shows that the 3 groups (those who participated in the unstructured interviews, basic questionnaire only and those who declined) share similar characteristics. Moreover, most of the businesses that fall under the later two groups are foreign-based IWMCs which are mainly concerned with transfer operations where recycling is concerned. In other words, there is no reason to believe that the data gathered from this sample does not provide a fair picture of what is happening in the industry as a whole.

¹⁴ This figure comprises the 11 telephone interviews and 5 on-site interviews in which only context data was collected

¹⁵ This figure relates to the total number of recycling activities per the material streams

¹⁶ Rounding difference

3.6 Research Methods Employed

This Section will present the research methods employed. The primary method was unstructured interviews and it was supplemented by observations. However, secondary research was necessary as a starting point to generate preliminary understanding and identify potential informants. A basic questionnaire which addressed BEP-NE's interests simultaneously captured the context data required in this research.

3.6.1 Secondary Research

Secondary research was mainly carried out prior to the fieldwork, although it was an ongoing process when this was appropriate. There are two parts to the secondary research carried out for this study. The first part involved researching and reading formal sources of information such as Government reports and proposals, the recycling literature and a very minor portion of the entrepreneurship literature pertaining to recycling businesses. In doing so, the researcher was able to develop pre-understanding (Glaser and Strauss, 1967). This enabled the researcher to develop some knowledge about the social changes pertaining to the recycling industry, business and entrepreneur. In turn, this helped to demonstrate the pervasiveness of constructionism tools in perpetuating socially constructed representations (Smith, 2006) associated with the recycling industry.

The second part focused on generating a database of recycling businesses in the North East of Scotland. For this, the researcher built on the existing data held by BEP-NE and augmented it with other sources: www.letsrecycle.com; the yellow pages; telephone and business directories); www.yell.com; www.wrap.org.uk; www.touchaberdeen.com; Scottish Environmental Protection Agency's Registry; and the phone book. Microsoft Excel was used for this purpose. This is because of its user-friendly features. It supports the need to adjust ways in which the researcher can organise data increase or decrease categories of data to be input and generate statistics and charts to quantify relevant figures related to context data at a later stage. Information such as the name of the company, address, telephone number and names of contact persons were input into the database.

3.6.2 Basic Questionnaire

The questionnaire focused on information relating to the types of reprocessing activity, the waste material streams that the company handled, the end-product produced from the reprocessing activity, the way in which this end-product is normally channelled, the company's year of incorporation, the year in which waste processing activity was commenced, the number of employees, their waste processing capacity and licences held¹⁷.

The researcher initially planned to present these questions to the informant at the early stages of the interview. This approach was adopted for telephone interviews. However, following the first on-site visit experience, she realised that presenting these questions at the initial stages of the interview was not suitable. It seemed to set a formal tone for the interview, and created a barrier to building the rapport necessary for probing into in-depth issues. Consequently, the approach adopted for the remainder of the interviews was to incorporate those questions as and when relevant during the course of the conversation with the informant.

Data collected from this questionnaire was then keyed into the augmented database according to the company to which it relates. These data were later analysed using descriptive statistics. The purpose is to capture the characteristics of local recycling businesses which are currently not found in any available sources of information about the region.

3.6.3 Primary Method: Unstructured Interviews

The literature provides different models of unstructured interview. In part, this may be due to its informal nature. Nonetheless, the core characteristics of open-endedness and creativity potentially provide greater breadth and depth than any other types of interview.

¹⁷ The number of employees does not include people with learning and physical disabilities in social and public sponsored enterprises because of the nature of their role in the enterprise. Further, data pertaining to waste processing capacity and licences are segregated by the researcher during the data input process as they are solely BEP-NE's interest and not part of the presented in thesis.

When conducting unstructured interviews, the researcher begins with the assumption that she does not know what the necessary questions are; hence, there is no set order of questions or wording; no fixed level of language (Berg, 2007). The researcher needs to forget the how-to rules and adapt herself to the ever-changing situations that she faces (Douglas, 1985). This encourages informal conversations to take place between the researcher and the informant. In turn, the researcher can be highly responsive to individual differences and situational changes; questions can be individualised to establish in-depth communication and the immediate surroundings and situation can be tapped into in order to increase the specificity and immediacy of questions and responses (Patton, 1990). Further, the researcher would be able to gain additional information about various phenomena that she may observe (Berg, 2007). Consequently, it promotes flexibility in research design and enables her to recognise the relevance of 'venturing' into other forms of data collection methods such as story telling, life-history and critical incident techniques where appropriate in order to enhance the depth of empirical data collected. The researcher must adapt to the world of the individuals studied and try to share their concerns and outlooks (Fontana and Frey, 1994). Unstructured interviews vary widely, given their informal nature and the nature of the setting, and some eschew any pre-established set of techniques (Douglas, 1985). The researcher begins by breaking the ice with general questions and gradually moves on to more specific questions, while also as inconspicuously as possible asking questions intended to check the veracity of statements made by the respondent, and avoids personal opinions on matters discussed (Fontana and Frey, 1994).

Unstructured interviews were the main data collection method for the study. Prior to the interview, the researcher mentally prepared herself to establish rapport with the informant. Establishing rapport was paramount in this study because of the need to understand the meanings attached to the recycling business. Only through a sufficiently close rapport with the informant can this be achieved. Whilst respect of the informant and assuring confidentiality is crucial, the researcher also needs to see herself as a learner and humbly presents herself as that (Wax, 1960). That is to

say she attempts to see the situation from the perspective of the informant rather than impose a world of academia and preconceptions about them (Fontana and Frey, 1994). The researcher went into the interviews with one broadly defined purpose: to understand the social and historical context of the recycling entrepreneur's entrepreneurial experience¹⁸ from his or her own perspective. She focused on gaining access to the informant's perspective throughout the interview. Thus, topics discussed and questions asked were not in accordance with a specific order but governed instead by the specific situation (Gummesson, 2000). Impromptu actions were taken depending on specific situations so that the informant could bring her into his or her world (Patton, 1990). Nonetheless, probes guided the conversation, helped to ensure that the informant was not being led and confirmed that the information received from him or her reflected the actual situation (Jack, 2002). The main probes used were:

- Tell me.....
- That is interesting. Could you tell me more....
- How did that come about?
- How were you involved?
- Why do you think so?
- Have you always had that view?
- Who else was involved?

These probes were drawn out following a Supervisory meeting prior to the fieldwork and later on, found to be in line with those suggested by Lofland and Lofland (1984), Patton (1990), Curran and Blackburn (2001); and Berg (2007)

The interviews lasted between 1.5-3.5 hours at the informants' recycling sites. Interviews with thirty of the informants were recorded in a Dictaphone and later on transcribed using Express Scribe. One of the informants refused the recording of the conversations and thus, brief notes

¹⁸ For the few interviews with informants in integrated waste management companies, the main purpose was to broaden knowledge about the operations of the recycling industry

were taken throughout the 2.5 hour interview. This was enlarged upon immediately after the interview (Jack, 2002).

As the study progressed, it became increasingly clear to the researcher that understanding cannot be derived without reference to the past. As Pettigrew (1997) pointed out, the best fact is one that is set in context, that is known in relation to other facts; that is perceived as part of the context of its past, and that comes into understanding as an event which acquires significance because it belongs in a continuous dynamic sequence. It was thus necessary to remain alert to the use of other techniques such as storytelling and life-history to probe when appropriate. These were used informally when the topic in the informal conversation between the researcher and the informant(s) suggested their usage. On this basis, they are referred to as investigative tools rather than techniques by themselves in this study. That is to say, the unstructured interviewing process was embodied by informal conversation and when the situation demanded, story telling and life history techniques were used as investigative tools to probe.

3.6.4 Supplementary Method: Observations

Masson (2002) noted that observation methods are well suited for research that is concerned with the dimensions of social world and styles of behaviour in certain settings. Observation as serves as a bedrock source of human knowledge when researchers are interested in studying the social and natural world around them (Adler and Adler, 1994). It is therefore a useful alternate source for cross-checking (Douglas, 1976) and triangulation (Denzin, 1978) with interview data. It also permits the researcher to go beyond external behaviour to explore the internal states of the informant (Patton, 1990). This helps to enrich structure and meaning of the data collected from interviews (Fielding and Fielding, 1986). Consequently, meaning is clarified and different ways in which the phenomena could be seen is identified (Stake, 1998). This will also add rigour to the methodology (Denzin, 1978), yielding depth and breadth of the research and enhancing consistency and validity of data (Alder and Alder, 1994).

It is necessary to distinguish between qualitative observations conducted for this research and quantitative observation. Some of the key differences are extracted from Alder and Alder, 1994:

- Quantitative observations are experiments conducted in the laboratory, whereas qualitative observations occur in a natural setting, among the actors who would naturally be participating in the interaction, and follows the stream of everyday life;
- Quantitative observations involve visual data gathering, whereas qualitative observation encompasses more than visual data gathering. It includes the full use of human faculties in gathering impressions of the surrounding;
- Quantitative observers focus on the minute particles of the world that can be agglomerated into a variable, whereas the qualitative observers look for much larger trends, patterns and styles of behaviour;
- Quantitative social scientists study the every-day life of actors in a systematic and purposive way, whereas qualitative social scientists study their surroundings repeatedly, and their curiosities are spurred by theoretical questions about the nature of human action, interaction and society.

Note:

There are two forms of observations involved in this study:

- Drive-bys, as elaborated in page 109; and
- The researcher's interview experience which includes the process of interviewing in a first instance; and after the Dictaphone is turned off. For example, the informants' extreme intonations, expressions, subject emphasis, the researcher's feelings, artefacts; and the enlargement of field notes that has been taken.

3.7 Ethics

Because the objects of inquiry in interviewing are human beings, extreme care must be taken to avoid any harm to them (Fontana and Frey, 1994).

The ethical issues emphasised in this study are:

- Informed consent: Informants were contacted via the telephone in a first instance. This is when the researcher introduced herself and the

research project and interests. The purpose of the site visit, the collaboration with BEP-NE and the extent of the information that to be shared with BEP-NE were also revealed. After the conversation and upon approval by the informant for the site visit and interview, a formal letter was sent to him or her. The letter re-stated the information provided via the telephone. To ensure that the informant was clear of the purpose of the visit, these issues were brought up at the start of the interview again.

- Confidentiality: Informants were assured of confidentiality during the telephone calls to arrange for the site visits and this is was re-stated in the letter confirming the interview arrangements. Confidentiality was also assured throughout the interviews and especially when the informant provided some information which he or she emphasised as 'confidential'.
- Anonymity: All the informants' names used in this thesis have been disguised to preserve anonymity and confidentiality.
- Data storage: Interviews were transcribed and typed in Word documents and a password was assigned for access. The research diary also requires a password for access.

3.8 Summary of the Methodological Considerations

A summary of the key issues considered in this Chapter are provided below:

- Social construction view as theoretical orientation; interpretivist ontology, constructivist epistemology and qualitative inquiry follows;
- Collaborations with BEP-NE to support access to informants;
- Research design incorporates use of multiple methods to yield breadth, depth and validity of data. The primary data collection method is unstructured interviews. Of the 45 recycling businesses within the North East of Scotland, 49% participated in in-depth interviews and a total of 84% have provided context data for this study.

CHAPTER 4

INSIGHTS INTO THE CONTEXT: UNDERSTANDING THE NATURE OF THE RECYCLING INDUSTRY

4.1 Introduction

Aldrich and Martinez (2001) acknowledged that integrating context and process into research designs is a major challenge. Following that, a critical issue to be addressed in understanding the entrepreneurial process centres on what the entrepreneur does to create and sustain organisations in face of obstacles. In this regard, a few points are highlighted: firstly, the entrepreneurs' embeddedness within the society in which they operate (Granovetter, 1985); secondly, the entrepreneur and entrepreneurial process are aspects of the same phenomenon which cannot be separated from the context in which it operates (Chell, 2000); and thirdly, the quest to understand what is really going on in the recycling industry is to locate the entrepreneur in his or her context. Thus, the importance of understanding both the context in which the recycling entrepreneur operates and the individual recycling entrepreneur are both important in an attempt to understand the phenomenon of entrepreneurship in the recycling industry.

The present Chapter provides a starting point to integrate context and process in this study. It provides a macro perspective of the research context and dwells on the larger purpose of this study which is to develop insights into the nature of the recycling industry. This is fundamental to the drawing of sensible generalisations that are essential for understanding the entrepreneurial process in the industry. This Chapter is guided by an initial research question: 'what is the nature of the recycling industry?' To do this, it takes a context oriented approach, focusing on a regional setting, the North East Scotland and draws on data collected during fieldwork.

The recycling industry is multi-faceted. It is a dispersed industry which uses a wide range of waste materials to reclaim value through different types of recycling operations, and involves a variety of organisations as well as business models. Furthermore, businesses operate under different physical,

financial and social settings. This multi-faceted scenario may pose complexities in an attempt to understand the context in which the recycling industry operates ('the context'). Yet, understanding the context is critical to developing insights into the nature of the industry. The approach is thus directed to strategically and progressively understanding the formation of the context. This is done in three stages.

The first stage focuses on developing a broad understanding of the nature of the recycling industry to provide a panoramic view of how it operates. The effects of ownership differences in the industry, in part reflected in the unique features of its roles as well as the stakeholders of recycling businesses are presented. This forms the basis for exploration of the research issues in the second stage. It suggests that the recycling industry is embedded in a set of environmental conditions and this environmental context consists of a complex set of elements. The environmental context therefore needs to be understood in order to develop convincing insights into the formation of the context.

The second stage considers and explores how the environmental context in which the recycling industry operates may be understood. The role of the recycling industry in landfill diversion, the contrasting cultural settings in which the recycling industry operates; as well as the changes and transformation to the role played in the nineteenth and early twentieth century shown in the first stage seem to suggest social, political and economic strands as emerging themes for analysis of the environmental context. The environmental context in which the recycling industry operates is therefore imagined as comprising analytically different elements i.e. social, political and economic strands. This way of understanding the environmental context has also been used in other entrepreneurship research too. For example, Bird and Jelinek (1988) described the contextual factors of entrepreneurship as consisting of social, political and economic variables. The second stage therefore provides a descriptive account of these strands. This is followed by a description of the consequent production of culture. In particular, it highlights the notion that social demands pertaining to environmental concerns have given rise to political

responses. Consequently, this gave rise to socio-cultural and economic implications that are reflected in the green values embedded in society as well as the increased value perception of the recycling industry, business and entrepreneur.

The third stage proceeds to understand the formation of the context. In doing so, it explores and discusses the interplay between strands and culture in the environmental context and seeks to understand their impact on the nature of space. Drawing on the particularities of the North East of Scotland, it further seeks to understand how culture and spatial strands interplay to create contextual opportunities and specific characteristics of local recycling businesses. It explores how strands create the context in which the recycling industry operates. It is also argued that the context in which the recycling industry operates is an enduring green context. That is to say, it emanates from green concerns and also increases green concerns in a dynamic interplay between strands and culture.

The Chapter is structured so that these three stages are conveyed progressively to the reader. The next Section 4.2 provides a panoramic view of the industry. Firstly, the reader is essentially made aware of the involvement of both for-profit and not-for-profit sectors coupled with the distinctive ownership features of recycling businesses in each individual sector. Secondly, the industry's roles as producer of recycled products and service provider to different user groups as well as its overarching role in landfill diversion is presented. Thirdly, a description of the stakeholders which highlights the distinctiveness of stakeholder roles, stakeholding structure and stakeholder networking activities is provided. In Section 4.3, the researcher probes into the environmental context which embodies the context in which the recycling industry operates so that the fundamentals which form the context can be diagnosed. In order to achieve this, she imagined the environmental context as comprising analytically different elements categorised into social, political and economic strands, and provides a description of these strands. Thereafter, the interplay between these individual strands which results in the production of culture in the environmental context is presented. Section 4.4 proceeds to demonstrate

that strands and culture interplay and creates a context that is conducive for entrepreneurial opportunities. This becomes articulated and manifests itself within the particularities of North East Scotland, and thus creates the characteristics of local recycling businesses. Basic descriptive statistical findings have been used to show these characteristics. The green structure is also highlighted. Finally, Section 4.5 summarises the Chapter and synthesises all the above.

4.2 A Panorama

This Section addresses the first stage of understanding the formation of the context. Its purpose is to develop a broad understanding of the nature of the recycling industry. With this approach, one learns what the industry is about and at the same time, develops a panoramic view of what is happening in the industry. To know the industry in this way at this stage of the study is useful because it creates the space to allow an awareness and appreciation of the deeper and interdependent parts of the industry which underlie the breadth of this picture. As analysis of the study at large, and this Chapter in particular proceeds, these parts will be 'unpacked' and explored in the light of the research questions paving the way to profound interpretations of the context. The Section highlights the different types of ownership in the industry, its roles and unique stakeholder groups.

4.2.1 Ownership

The recycling industry is an industry which involves both the for-profit and not-for-profit sectors. In the for-profit sector, recycling businesses are set up for commercial and profit making purposes. Recycling businesses in the not-for-profit sector often started off as projects either initiated by, or in collaboration with, local authorities or local community voluntary organisations but subsequently became independent business entities. This scenario seems to imply that the recycling industry operates in different and possibly contrasting cultural settings. Patterns of differences and contrasts can be identified appears in two ways: first, in the different perspectives of the industry's role as a service provider; and secondly, in the distinctive stakeholding structures between different ownership types. The ensuing parts of this Section elaborate on this.

4.2.2 Role

This Section will provide a description of the roles of the recycling industry. In brief, it shows that the industry has three roles: firstly, its role as producer of recycled products; secondly, its role as service provider; and thirdly and perhaps the most important, its role to society in diversion of waste from landfill. Figure 4.1 illustrates the roles of the recycling industry and the mechanics of how it works.

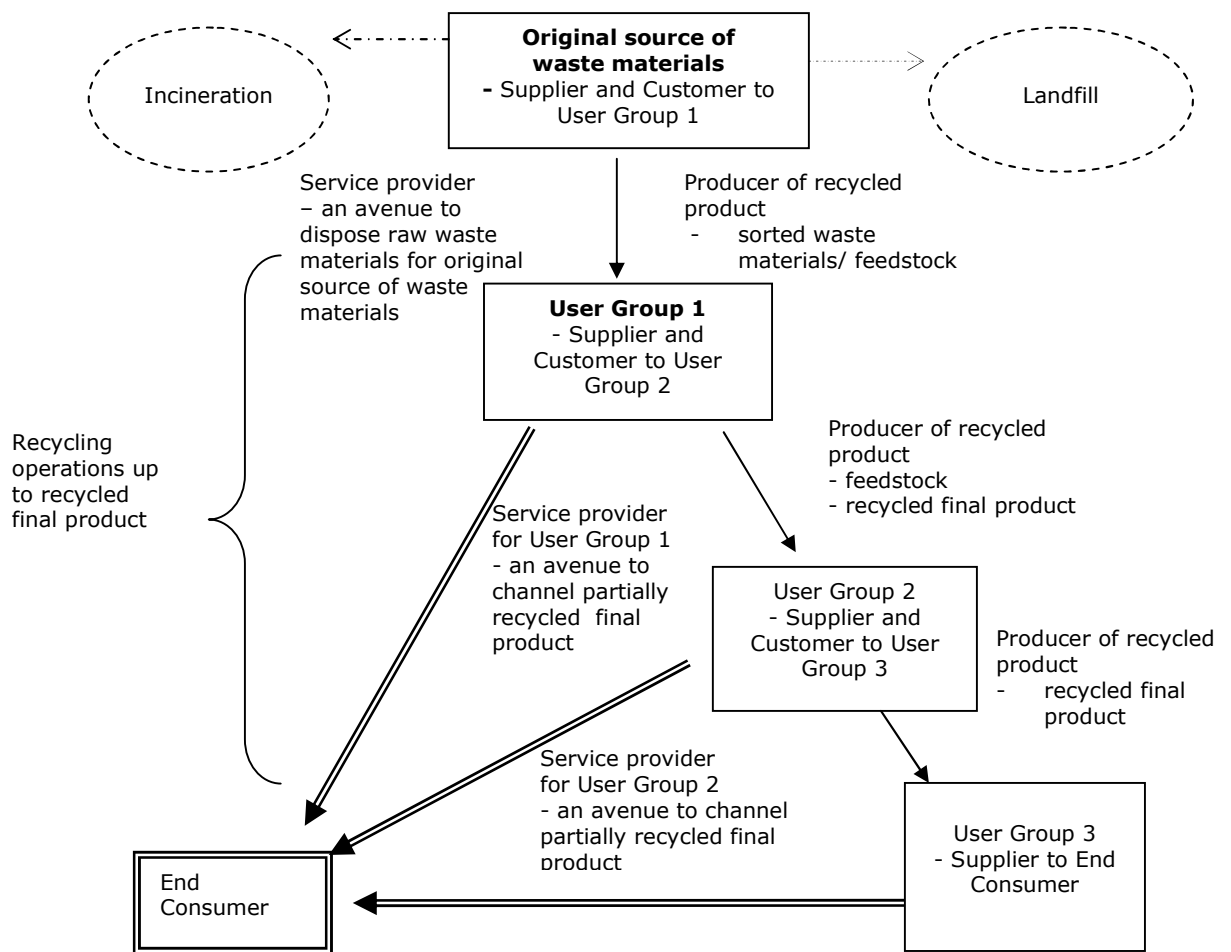


Figure 4.1: Recycling Industry: Positioning its Roles (Source: Author)

4.2.2.1 Producer of Recycled Products

As a producer of recycled products, the industry carries out recycling operations by reusing waste materials so that they are reprocessed and their value is to an extent reclaimed. The different stages involved in the

reclamation of value from the waste means that the industry's role as a producer does not necessarily mean that all recycling businesses produce a recycled final product ready for use by the end consumer. Depending on the type of recycling operations that a business is engaged in, they may produce recycled products which are channelled for use by the end consumer or to other waste re-processors who will further transform it into that state.

Figure 4.1 illustrates the flow of recyclables from the original source of supply up to the production of the final product for the end consumer. The original source of supply is the supplier of recyclables. This is channelled to Recycling Businesses Group 1 as raw waste materials selected to be recycled into a usable recycled end product. When that occurs, the original source of supply becomes supplier of recyclables and customer to Recycling Businesses Group 1. The end product produced by Recycling Businesses Group 1 takes either one of two forms: final product which is ready for use by the end consumer; or end product which needs further reprocessing to be transformed into the final product. When the former occurs, Recycling Businesses Group 1 becomes a supplier of and customer to Recycling Businesses Group 2. This flow of recyclables carries on until the final product for the use by the end consumer is produced.

4.2.2.2 Service Provider

However, the producer of recycled products is also a service provider (see Figure 4.1). Growing environmental concerns and green behaviours have created a demand for an avenue where wastes can be channelled, as an alternative to improper disposal and landfill. The recycling business is an avenue where such a service may be provided for companies, local authorities or the general public and where these parties simultaneously supply the recyclables and pay for the service.

Nonetheless, due to the involvement of the not-for-profit sector, the industry's role as a service provider is not limited to the above. There are other perspectives of the industry as a service provider. These are not incorporated in Figure 4.1.

The first is related to the creation of work for people with learning difficulties and physical disabilities. In the 1990s, local authorities started to look at recycling practices as a means to help people with learning difficulties and general disabilities. For example, RB8, a social organisation engaged in wood recycling is an outcome of collaborations between Aberdeenshire Council and the Secretary of a social organisation in Scotland, who was considering ways to help people with learning difficulties in rural locations. Besides that, local authorities have also set up recycling projects for this purpose. RB18, RB19 and RB23 are examples of projects which have consequently become independent businesses accountable to the Councils but nevertheless responsible to lay out their own business plans and strategies and execute them. From this perspective, these recycling businesses are seen as service providers for the Social Services Department. They provide a service for the Social Services Department to move people with learning and general disabilities from the Day Service Centre to a real workplace. The local authority is therefore a customer to the recycling business and is liable to pay for this service. On the other hand, these businesses are also service providers for the individuals with learning and general disabilities themselves. The recycling business provides a service which addresses the needs of these people to have real work experience so that they may experience more fulfilling lifestyles through the development of meaning, purpose and joy in the work experience.

The second sense in which recycling businesses can be regarded as service providers relates to the voluntary venture. Tavion, the Project Manager of RB11, a social enterprise engaged in the recycling of computers views the business as a service provider for the volunteers because it is an avenue for them to develop new knowledge and skills. It is also seen as a service provider for society at large. From this perspective, it offers an avenue where society can channel their old computers for recycling. Hence, it is seen as a service which enables society to do good, enact positive environmental behaviour and ease some environmental concerns, whilst simultaneously benefiting some disadvantaged groups.

4.2.2.3 Diversion from Landfill

As shown in Figure 4.1, the presence of recycling businesses has provided an alternative avenue for waste materials, and hence increased diversion from landfill. Within the context of this study, the recycling business is technically that unit in the recycling system which provides an avenue for diversion from landfill. It serves the collection and disposal of waste and runs materials recycling facilities for preparation of waste into feedstock for re-processors or for re-processing the recyclable materials into a final usable product. The individual accountable for and leading the operations of the recycling business is the recycling entrepreneur. These are the units of the recycling system that composes the recycling industry.

Thus, the recycling industry is an industry which deals with reusing waste materials so that they are reprocessed and their value reclaimed. From this, one can almost immediately capture the heterogeneous nature of the industry, exhibited in an enormous range of waste materials that are used for producing recycled products. Indeed, any tangible object which does not serve its intended purpose at the point of possession or any subsequent new purpose by any one party may be deemed to be waste material. Further, informants do not classify their businesses as part of the recycling industry. The informants involved in paper, wood and glass recycling classify themselves as part of the paper, wood and glass industries, respectively. So the recycling industry may be seen as a convergence of multiple industries, and hence a producer of a wide range of recycled products. The recycling industry within the context of this study represents a broad classification which includes the of aggregate recycling businesses' activities i.e. all types of recycling operations and all types of waste materials, managed, led and run by the recycling entrepreneur. It might be useful to mention that this present definition does not fall within the scopes of recycling industry in the extant recycling literature (Section 2.2). But more importantly, this means that the recycling industry (at least within the context of this study) has a critical role in diverting all forms of waste materials from landfill.

Three issues need to be highlighted in this part. Firstly, regardless of its difference in scope in relation to extant literature the recycling industry retains its role to society (businesses, local authorities and general public) for landfill diversion. It does not matter whether the recycling industry's role is seen as producer or whichever form of service provider. Ultimately, the recycling business is an alternative avenue to divert from landfill. Secondly, these roles represent a major change and transformation from earlier social positions when it was popularly taken as an alternative for economic survival. Thirdly, the different ways in which it provides the service seems to imply contrasting cultural settings within the industry. This third point is further strengthened by the exploration of its stakeholders in the next subsection.

4.2.3 Stakeholders

This Section will show that both for-profit and not-for-profit sectors have distinctive stakeholder characteristics in terms of stakeholder roles, stakeholder structure and stakeholder activities. These differences will be discussed under two headings, namely internal stakeholders and external stakeholders. Before proceeding further, it may be useful to mention that generic stakeholder groupings have been modified in this Section to suit the context of the recycling industry.

4.2.3.1 Internal Stakeholders

The key internal stakeholders are the manager and the workforce. There are two types of managers: the owner manager of the recycling business; and persons employed for positions which may be assumed equivalent to the roles and responsibilities of the owner manager. These would normally be persons employed to oversee operations and management, lead strategic planning and decision making for the recycling businesses in the not-for-profit sector of the recycling industry. However, this is not always the case. As Table 4.1 shows there is one informant employed by a foreign integrated waste management company who assumes an equivalent role to the owner manager.

The workforce may be divided into three categories: employees in the normal sense or persons employed for a specified job scope; trainees who are alternately termed service users or clients; and volunteers who offer their services for no charge in the NfP sector of the recycling industry.

Internal Stakeholder		Examples from Data
Manager	Owner Manager	<u>For-profit</u> All informants in the for-profit sector who are self-employed, oversee operations and management, lead strategic planning and decision making for the recycling businesses
	Owner Manager Equivalent	<u>Not-for-Profit</u> All informants in the not-for-profit sector who have been employed to run, lead, oversee and manage operations and management; and are involved in strategic planning and decision making for the recycling business. <u>For-profit</u> One informant in the for-profit-sector employed by a foreign integrated waste management company to run, lead, oversee and manage operations and management; and is involved in strategic planning and decision making for the recycling business.
Workforce	Employee	<u>For-profit</u> Persons employed under employment contracts to perform specific tasks in the recycling businesses. <u>Not-for-Profit</u> See Owner Manager Equivalent above
	Trainee/ Service User/ Client	<u>Not-for-Profit</u> Persons with learning difficulties and physical disabilities not employed under employment contracts; instead but are paid £2.50 for their work attendance per day (see Table 4.2 where they are simultaneously acting as a customer).
	Volunteer	<u>Not-for-Profit</u> Persons who contribute to the operations of voluntary recycling businesses voluntarily and thus receive no financial rewards.

Table 4.1 Internal Stakeholders

For the not-for-profit business, the key internal stakeholder is either the Manager or Project Coordinator who is employed to run, manage and lead the operations, lay out business plans and strategies. They can be deemed to be the persons who translate the vision of the not-for-profit business into reality. Their roles are almost equivalent to the self-employed owner manager. Perhaps the main difference lies in the fact that they are employed by, and have a reporting obligation to, the local authority or the Board of Directors; and they neither own a shareholding nor are entitled to profit sharing. Further, the workforce for these businesses does not merely comprise employees but includes people with learning difficulties and general disabilities or volunteers.

4.2.3.2 External Stakeholders

The key external stakeholders are the Government, Local Authorities, Scottish Environmental Protection Agency (SEPA), financiers, supplier-customer, Community Recycling Networks (CRNs) and the general public. Table 4.2 summarises these stakeholder groups and provides examples from the data collected.

Table 4.2: External Stakeholders

External Stakeholder		Examples from Data
Government		<u>For-Profit and Not-for-Profit</u> Similar role for all informants
Scottish Environmental Protection Agency (SEPA)		<u>For-Profit and Not-for-Profit</u> Similar role for all informants
Supplier- Customer	Businesses General Public Local Authorities Businesses Householder	<u>For-Profit</u> Original source of municipal solid waste, direct supplier to for-profit recycling businesses. <u>Not-for-Profit</u> Original source of municipal solid waste, supplier to local authorities and channelled to not-for-profit recycling businesses initiated by Local Authorities.

Table 4.2: External Stakeholders (Continued)

External Stakeholder		Examples from Data
Customer	Intermediate Re-processors End Consumer	<u>For-Profit and Not-for-Profit</u> All recycling businesses engaged in the intermediate and/ or final re-processing of waste materials (or feedstock, as the case may be).
Financiers	Bank	<u>For-Profit</u> Some businesses in the fP sector
	Holding Company	<u>For-Profit</u> Recycling businesses that are subsidiaries of existing businesses
	Franchise Headquarters	<u>For-Profit</u> Recycling businesses that are franchises
	Trust and Funding Bodies	<u>Not-for-Profit</u> Independent not-for-profit recycling business
	Established Companies (mainly offshore: Enviroco, Exxon Mobil)	<u>Not-for-Profit</u> All not-for-profit recycling businesses that are initiated by or managed in collaboration with the local authorities.
	Local Authorities	<u>Not-for-Profit</u> All not-for-profit recycling businesses that are initiated by or managed in collaboration with the local authorities
Community Recycling Networks		<u>Not-for-Profit</u> All not-for-profit recycling businesses that are initiated by or managed in collaboration with the local authorities

End of Table 4.2

The roles of the Government, Scottish Environmental Protection Agency, supplier-customer and the general public applies across the industry regardless of the sector in which the business operates or the type of recycling business. The Government enforces regulations, collects taxes, imposes penalties and initiates policies. The Scottish Environmental Protection Agency sets the environmental regulations and also provides advice on compliance issues.

The supplier of waste materials for the recycling business is normally the customer as well because he or she is 'purchasing' an alternative service to landfill, and pays a gate fee. So in effect, the supplier and customer of the recycling business refer to the same party. They are suppliers because they supply recyclables. However, they differ from suppliers in the conventional sense because they do not get paid for the recyclables. Instead, they pay for the services provided to them such as disposing their waste materials or channelling their partially recycled end products. The general public may also be regarded as suppliers because of their participation in kerbside and household schemes. In this case, it is the local authorities that are 'purchasing' the service provided by the recycling business.

The types of financiers vary according to the type of business and the sector in which they operate. Common financiers for businesses under the for-profit sector are banks, the holding company or the franchise headquarters where relevant; whereas businesses within the not-for-profit sector may be financed by local authorities, trusts, funding bodies or established companies, mainly from the offshore industry. Funding bodies or trusts are crucial for the not-for-profits as they provide the major proportion of their working capital, at least during the start-up phase. This scenario does not occur in the for-profit businesses where the bulk of finances come from the owners or personal loans.

Whilst local authorities have political interests across the industry, their role in the not-for-profit recycling sector is wider than in the for-profit sector. Their principal role in the latter sector is seemingly representatives of the Government, for example, to ensure that application procedures such as obtaining the Planning Permission are properly adopted. In the not-for-profit sector, their role is extended to providing finance and acting in an advisory capacity.

Community Recycling Networks are communities of recycling businesses which have the same mission but operate under the umbrella of various Local Authorities throughout Scotland. They cooperate, coordinate and share knowledge, ideas, information and supplies with each other. For a for-

profit recycling business, whose shareholders are the owner manager and his or her business partner, there are no Community Recycling Networks or equivalents. These firms take the conventional view that other recycling businesses which handle the same type of recyclables are rivals; whereas not-for-profit firms support each other regardless of the material streams that they process.

It therefore appears that the involvement of both for-profit and not-for-profit recycling businesses in the industry, and the different characteristics of these businesses within each of these ownerships results in differences in stakeholder roles and stakeholding structures. The most salient point from this Section is that both for-profit and not-for-profit sectors (and perhaps businesses within the same sector) have their own set of stakeholding patterns and thus further strengthens the idea that the industry operates in contrasting cultures.

Three apparently significant issues can be deduced from this panoramic view of the recycling industry. These include: the industry's role in landfill diversion; the changes and transformation of its role from previous generations; and the contrasting cultural settings in which it operates. In turn, these seem to imply that the recycling industry is embedded in a set of environmental conditions which needs to be understood in order to develop convincing insights into the context in which the recycling industry operates. An attempt to understand this environmental context is carried out in the next Section.

4.3 Environmental Context

The purpose of this Section is to address the second stage of understanding the formation of the context. It aims to develop insights into the environmental context which embodies the context in which the recycling industry operates.

The involvement of for-profit and not-for-profit sectors with distinctive ownership characteristics, different types of roles and stakeholder characteristics suggest that the environmental context consists of a complex

set of elements and operates in unique cultural settings. Yet, it is these elements and the interplay between them which form the context for the recycling industry. Furthermore, landfill issues, recycling targets and green behaviours are common subjects raised by the informants when they describe their operations and customers (or generally, stakeholders). At a basic level, the recycling processes remain largely unchanged. However, the image of the industry has been transformed. This is especially reflected in the shift of emphasis from pure economic survival to landfill diversion.

Consequently, it appears necessary to understand the environmental context which embodies the recycling industry in order to develop insights into the context in which it operates. For the purposes of analysis, it is helpful to imagine the environmental context as composed of analytically different elements, namely social, political and economic strands. This approach facilitates the articulation of a simplified but complete picture of elements in an otherwise complex environmental context may be articulated. The following sub-sections describe these strands individually.

4.3.1 Social Strand

The social changes and transformations pertaining to recycling practices were easily noticeable during the interviews as informants spoke about the way their businesses operate and shared their thoughts about current issues. This Section describes the social strand and highlights the social changes over time. These are pro-recycling behaviour, changes to the profile of the recycling industry, changes to the profile of the recycling businesses and changes to the profile of the recycling entrepreneurs.

4.3.1.1 Pro-recycling Behaviour

The increasing emphasis on recycling practices over the past two decades in the international, national and local arenas may also be observed within the context of North East Scotland. Recycling and recycling related activities are commonly found in various settings ranging from the State to commercial and educational establishments as well as the individual householder. People are increasingly assuming environmentally conscious behaviours and recycling is increasingly perceived as an environmental practice which

contributes to environmental preservation. Householders appear to have responded positively to the household collection schemes. The researcher has observed that the majority of residents in the neighbourhood where she lived put out their recyclable glasses, cans, plastic bottles, papers and cardboards for fortnightly collections. Informants also shared this change in their personal recycling attitudes. Daracha for example, said that she has changed from a non-recycler to one who ensures that her household waste is recycled, while Sima spoke about her aged mother's newly devoted recycling practice. However, there are exceptional cases where members of the public are required to pay a price for their items to be recycled. Sima and Tavion have voiced their frustrations about the public's lack of understanding in this regard. Nonetheless, there is generally an increase in pro-recycling attitudes and anti-waste behaviour (Barr, 2002).

4.3.1.2 Changes to the Profile of the Recycling Industry

Only 5 of the recycling businesses contacted are engaged in traditional reclamation of scrap metal for generations and do not represent the businesses which have been developed by entrepreneurs to address changes in legislation and social norms. It can be argued that waste pickers belong to the informal waste sector and therefore it is unlikely to find their details published. However, 3 of the sole proprietors who were metal recyclers informed the researcher that they no longer operate and their operations have been sold to the two main market leaders in metal recycling. Metal recycling is now a thriving business which employs a minimum workforce and tends to be machine intensive. Additionally, the increasing emphasis on recycling exhibitions, seminars, programmes, forums, magazines and other forms of media makes apparent the dominance of SMEs and larger corporations in the industry. The basic descriptive statistical findings of the fieldwork that was conducted show that 97% (37 businesses) of the recycling businesses which participated in this study comprised SMEs.

4.3.1.3 Changes to the Profile of the Recycling Businesses

Following the dominance of SMEs and large corporations in the industry taking over from the one-man scrap businesses that comprised the waste industry in the past, the profile of recycling businesses has also changed accordingly. In what follows, a description of changes is provided that underlines three significant aspects: the adoption of machinery intensive operations; the practice of innovation; and the importance of networking activities.

Machinery Intensive

Growth in the waste equipment industry, especially reflected in the annual reputable exhibition in Birmingham is obvious evidence that the recycling industry is a machinery intensive industry. This point is also substantiated by the researcher's site visits during fieldwork. The recycling operations are commonly located in huge physical sites largely occupied by complex machinery of large and medium sizes for loading, shredding, separating and sorting of waste. Examples of common machinery are screening and trauma machines, density separators and vibrator feeders. Sites may also contain hills of recycled materials either intermediately reprocessed or ready for use by the end consumer. These may be sawdust, chips, shredded or granulated materials and in a very rare instance, well-polished and ready-made furniture. Alternatively, sites may be highly congested with recyclables right up to the gates, or there may be stacks of baled materials suffocating its space, awaiting transport to the re-processors' destination. Furthermore, large and established companies have been inclined to contribute to the not-for-profit businesses in the recycling industry by way of donating machinery. All the machinery found in RB18 and RB19 were donated by companies such as Enviroco, Exxon Mobil and Coral. Additionally, Brody who has been diverting attention from his manufacturing to recycling operations makes annual trips to America's road-shows in order to purchase suitable machinery. According to him, '*machines are the only way to go*'. This has been a common opinion amongst the informants.

Innovation and Networking Activities

Logically, the manner in which recycling businesses conduct their operations and the amount of labour involved point to the adoption of technological approaches and innovation which a lone operator would be unable to adopt. Phyfe's business is a good example. He was initially exposed to the business of recycling by his grandfather who was a scrap merchant. To-date, the business has expanded and they run skip hire, collection, sorting and intermediate reprocessing into feedstock.

Additionally, informants are drawn to use innovative approaches, technical knowledge and problem-solving skills in their operations. Farlane has used his technical knowledge to create an innovative edge to producing bio-fuel from cooking oil. Furthermore, informants are engaged in more networking activities to help them with the running of their businesses, and to seek resources to sustain and grow. For example, Daracha has taken the initiative to learn about plastics recycling from the largest plastics recycler in Scotland in order to help her gain an advantaged position in securing funds for the business.

4.3.1.4 Changes to the Profile of the Recycling Entrepreneurs

Recycling entrepreneurs have also changed in various ways over the years. Today, they attach a sense of professionalism and prestige to their businesses. Their mission encompasses those higher social and environmental values and is not confined to the performance of activities purely aimed at economic survival as was the case with earlier generations.

Social Status

As Phyfe put it-

'...the kinds of people that are operating now are moving forward from the original kind of dodgy gypsy type people...'

Phyfe's point coincides with the informants' profile on education and work experience. Most of the informants belong to the middle class. Their education ranges from lower secondary to higher secondary and tertiary levels; and their work experience ranges from null to significant industrial

experience. Gilmore left school at an early age but his father who was the Chairman of further education institution provided appropriate business guidance. Sutherland's only work experience before he started the skip hire company was as a lorry driver for a transport company. However, he was brought up on a farm and his father was already operating a landfill site. At the other end, there are Phyl, Farlane and Jamie who have earned Honours and Master's Degrees. There is also Sima who sat in the Board of Directors of a well-known Food Agency before she joined Kyrk in the Business, Carlton who is the Chairman of the local authority; and Henderson who chaired the Forestry Contractors' Association.

Professionalism and Prestige

The recycling business today portrays an image of professionalism. This applies to both for-profits and not-for-profit businesses. For example, Forbes and Daracha emphasised the development of a professional image for the trainees in terms of their task responsibilities as well as attire and representations during company events. RB8 has often appeared on corporate videos while RB7 and RB16 have appeared on television. Often, their conversations surrounding these subjects suggest a sense of prestige attached. As Sutherland from RB7 puts it:

'We got on TV a few times.....Everybody's got a quarter of an hour when they are famous in their life....To see your lorry in the TV was something special. I mean to see the name. It wasn't so much of the lorry. It was to see the name on TV....So that was quite a fame...'

Wider and Higher Purpose

In those days when the industry was dominated by informal waste processing, the main purpose was economic survival. However, data from the fieldwork shows that the present day recycling entrepreneur has both a wider and a higher purpose. For example, the founder of RB8 was the Secretary of a social organisation who was seeking ways to help people with learning difficulties and wood recycling was an avenue she identified. Similarly, Forbes and his team were seeking to increase the number of jobs for people with learning difficulties with whom they were working because

the workload in old folks' gardens was not sufficient for the group of twenty. From another perspective, Garry's main purpose was to build useful practical foundations to enable him to genuinely execute his environmental commitment and uphold his 'tree hugger' reputation.

4.3.2 Political Strand

This Section is focused on the political support for greening and the political responses to social demands pertaining to environmental concerns which have substantially increased the importance of the recycling industry. The political responses referred to here include the response to issues emanating from the Landfill Directive such as the imposition of penalties and the hitting of recycling targets. There have also been initiatives to increase public awareness.

4.3.2.1 Landfill Penalties and Tax

From the perspectives of the entrepreneurs interviewed, the most significant impact within the political strand is the Landfill Directive which led to the imposition of landfill charges and the creation of the Landfill Tax Allowance Scheme. Very high penalties are imposed after a certain tonnage of waste has been landfilled. These measures have incited businesses and local authorities to divert waste from landfill. The pile of green waste at the Mintlaw transfer station spotted by Gilmore was as a result of Aberdeenshire Council's bid to avoid the landfill charges and unsuccessful attempts to find an alternative way of disposing of it. Equally, Moray Council was facing problems disposing of used computers when Moray Voluntary Association initiated the idea to refurbish them.

4.3.2.2 Recycling Targets

Another significant issue which emanated from the Landfill Directive is the policy measures aimed at the recycling targets such as household and kerbside recycling schemes. This puts tremendous pressure on the local authorities to seek alternative ways of diverting household wastes from landfill. Local authorities have also collaborated in recycling projects within the not-for-profit recycling sector to increase alternative avenues for landfill diversion.

4.3.2.3 Public Awareness

Local authorities have undertaken various initiatives to increase public awareness about recycling. Obvious ones are the dissemination of flyers to householders to increase awareness of the 3Rs (reduce, reuse and recycle), road-shows and public education programmes such as those with which the not-for-profit recycling businesses have been regularly involved.

4.3.3 Economic Strand

The imposition of landfill penalties and the increase in the landfill tax and costs have also had serious economic impacts on businesses and local authorities. Apart from the need to seek alternative routes to landfill, informants also perceive an underlying cost saving need.

4.3.3.1 Cost Savings Avenue

Recycling businesses provide alternatives to dumping wastes into landfill. The high landfill tax means that recycling businesses may be cost saving avenues for businesses and local authorities given that the gate fee charged by recycling businesses are normally lower than landfill charges. For example, Gilmore said that local authorities were paying him approximately half the amount that they would incur should their green waste be sent to landfill. Consequently, many businesses prefer to send their business wastes to recycling businesses for cost saving purposes. Several other informants have acknowledged that their supplies have been growing every year because of the savings businesses make from diverting their waste to them.

4.3.4 Culture in the Environmental Context

It is fair to acknowledge that some people may be put off when they are required to pay in order to recycle their used products (Section 4.2.1). However, this does not mean that they do not value the services provided by the recycling industry. Often, their disagreement about payment appears to be a personal cost issue rather than a sceptical view of either the recycling business or the fees that are charged. It seems convincing that in this era, people and businesses are generally more inclined to value the importance of the recycling industry and its contributions. Data from the

fieldwork suggest that this scenario appears to be the outcome of a dynamic interplay between social, political and economic strands. Social cries pertaining to environmental concerns demanded urgent political attention especially as regards the social cost of dumping. This has resulted in changes to the economics of recycling. In turn, it has created a culture of increased value perception of recycling practices, industry, businesses and entrepreneurs. In other words, it has created a culture founded on better awareness of green values and appreciation of recycling. The purpose of this Section is to illustrate the interplay between these strands and the resulting culture. The ensuing parts in this sub-section focus on three perspectives: those of the general public, businesses and the potential entrepreneur.

4.3.4.1 Green Culture and the General Public

Public education in the form of formal road shows organised by or in collaboration with local authorities and informal forums has increased public awareness in recycling, strengthened society's green values and influenced an increased value perception of the industry. For example, Tavion strives to help individuals understand the importance of recycling as a general practice, as well as the importance of RB11 and voluntary organisations to practice recycling. From another standpoint, the employees, volunteers or trainees of recycling businesses have increased their personal recycling practices following their involvement in these businesses.

Public awareness programmes, kerbside and household support initiatives are likely to increase environmental consciousness and the likelihood of public support for recycling practices. Furthermore, the involvement of not-for-profit recycling businesses has also played a part in raising public awareness of recycling issues. Daracha, Forbes and Kamden all believe that they tend to get more support due to their not-for-profit nature. Thus, the public's underlying motive to support the not-for-profit sector helps in consolidating society's green values.

As householders, the entrepreneurs themselves also reflect increased green values. Ramsey admitted that he forced himself to engage in household

recycling so that he would sound more genuinely green when promoting his business to others. Daracha too mentioned that prior to her involvement in RB19, she never thought of, let alone recycled her household wastes. Kyrk and Sima also spoke about their aged Mother's recycling habits which have changed significantly since they began their recycling business.

4.3.4.2 Green Culture and Businesses

Data suggest that there are two ways in which the value perception of the recycling industry may occur for businesses which are obliged to observe proper waste disposal: economically and environmentally. Landfill tax and the penalties imposed under the Landfill Tax Allowance Schemes incite businesses to adopt recycling practices and divert their waste from landfill to recycling entrepreneurs. As mentioned above, businesses and other organisations alike have been compelled to find ways to avoid heavy taxes and penalties. Additionally, sending their waste for recycling instead of landfill reflects positively on the businesses' environmental and/or social responsibility scorecard. For some, it is important to reflect a healthy triple bottom line. In both instances, it seems reasonable to assume that these businesses would have an increased value perception of the services offered by the recycling business.

4.3.4.3 Green Culture and the Potential Recycling Entrepreneurs

The increasing emphasis on recycling and the improved image of the recycling industry have attracted potential entrepreneurs. Unemployed citizens may decide to venture into the industry (for example, Sutherland) and self-employed citizens may consider it a worthwhile diversification following the recognition of exemplary recycling businesses coupled with personal or existing business circumstances (for example, Kyrk). Both Kyrk and Sutherland took their first steps following a common observation that those already engaged in the business are thriving or have the potential to thrive. Thus, the increasing awareness of opportunities from recycling also forms part of the culture of increased value perception mentioned above.

Having explored the interplay between strands in the production of the green culture, the next Section explores the interplay between strands and culture in the third stage of understanding the formation of the context.

4.4 Spatial Context

This Section shows the impact of the interplay between the social, political and economic strands and culture which manifests in a spatial dimension, and thus creates contextual opportunities that are conducive for entrepreneurship. The analysis draws on both qualitative and quantitative data to show how these strands create the characteristics of local recycling businesses.

4.4.1 Contextual Opportunities

The interplay between the social, political and economic strands and culture draws to one crucial point: the creation of a context in which opportunities are available to be tapped. Table 4.3 shows that all the entrepreneurs have secured sources of supply for waste materials to carry out their recycling operations regardless of the type of business and sector in which they are engaged.

Table 4.3: Opportunity Availability: Market, Supply and Demand

Entrepreneur	Sector	Type of Business	Market, Demand and Supply
Bean	Profit	Private - local based multinational	Existing market already established at the bought-over.
Beathas	Profit	Private - family owned (with husband)	Supply from offshore industry.
Beiste	Profit	Franchise	Existing market through national advertising by Headquarters; Lack of similar service in the area; Recognised his own market potential: from home to walk-ins, SMEs and large companies; Recognised that services may be expanded, to include printing work and providing plastic paper which would help boost the refill operations.

Table 4.3: Opportunity Availability: Market, Supply and Demand (Continued)

Entrepreneur	Sector	Type of Business	Market, Demand and Supply
Brody	Profit	Private - partnership with outsider	Market from existing customer base in manufacturing of virgin protectors because of the lower price.
Carlton	Profit	Private - family owned	Supply of used tyres from the scrapping of ELVs and all garages throughout Scotland; The only tyre recycling company in Scotland.
Daracha	Not-for-profit	Local authority project	Increasing demand for cardboard recycling service; Council's recycling targets; Reliable supply; Consumer preferences.
Farlane	Profit	Private - family owned	Large soap manufacturing operations looking for outlets to dispose the end materials in the soap production; Potential sources of used cooking oil from restaurants and the offshore industry.
Forbes	Not-for-profit	Local authority project	Huge supply of aluminium cans from pubs, clubs and schools.
Garry	Profit	Private - foreign based multinational	15 year contract with Aberdeen City Council to manage its waste.
Gilmore	Profit	Private - family owned	Massive volume of green waste which the Council has not found a way to dispose; Potential supply from other Councils.
Gilmat	Profit	Private	Massive volume of construction waste generated from his existing construction business.
Henderson	Profit	Private - family owned	Secured supply of scrap board by main customer in his forest wood chipping business.
Iver	Profit	Private - partnership with friend	Supply from public, waste management companies and businesses.
Jamie	Profit	Private - partnership with friend	Collaboration with Donside Paper Company; Availability of supply from waste contractors and tank manufacturers.
Jock	Profit	Private - family owned	Won 5 year contract to transfer waste collected from Moray Council.
Kamden	Not-for-profit	Collaboration between Local authority and social enterprise	A meeting of minds wherein Shell and Aberdeenshire Council were looking for ways to dispose wood in environmentally friendly manner; Huge supply of wood waste from the oil industry.

Table 4.3: Opportunity Availability: Market, Supply and Demand (Continued)

Entrepreneur	Sector	Type of Business	Market, Demand and Supply
Kyrk	Profit	Private - family owned	Supply was potentially possible ranging from businesses to householders; Only one similar business.
Phyfe	Profit	Private - family owned	Supply of metals from the public, council, waste transfer stations and industries.
Ramsey	Profit	Private - partnership with friend	Secured supply of used protectors from employer; Encouragement for employer to divert used protectors to him rather than sending them to Japan for refurbishment because of cost and time savings.
Renaldie	Profit	Franchise	Existing market through national advertising by Headquarters; Lack of similar service in the area.
Sima	Profit	Private - family owned	Supply was potentially possible from ranging from businesses to householders; Only one similar business.
Skene	Profit	Private - partnership with friend	Supply from public, waste management companies and businesses.
Struan	Profit	Franchise	Existing market through national advertising by Headquarters; Lack of similar service in the area.
Sutherland	Profit	Private - sole proprietor	Supply was potentially possible ranging from businesses to householders.
Tavion	Not-for-profit	Social enterprise	Council facing problems on disposing old computers in environmentally friendly manner; Voluntary organisations needed computers for basic administrative tasks.

End of Table 4.3

As indicated in the earlier Sections of this Chapter, the increasingly strict environmental legislation and rising landfill costs have prompted businesses that have a legal obligation to dispose of their waste in an environmentally friendly manner to seek cheaper alternatives to landfill. Consequently, there are huge volumes of waste materials left unprocessed and a high demand for recycling services. The growth in the number of recycling businesses

following the introduction of the Landfill Directive in 1996 and associated issues is depicted in Figure 4.2.

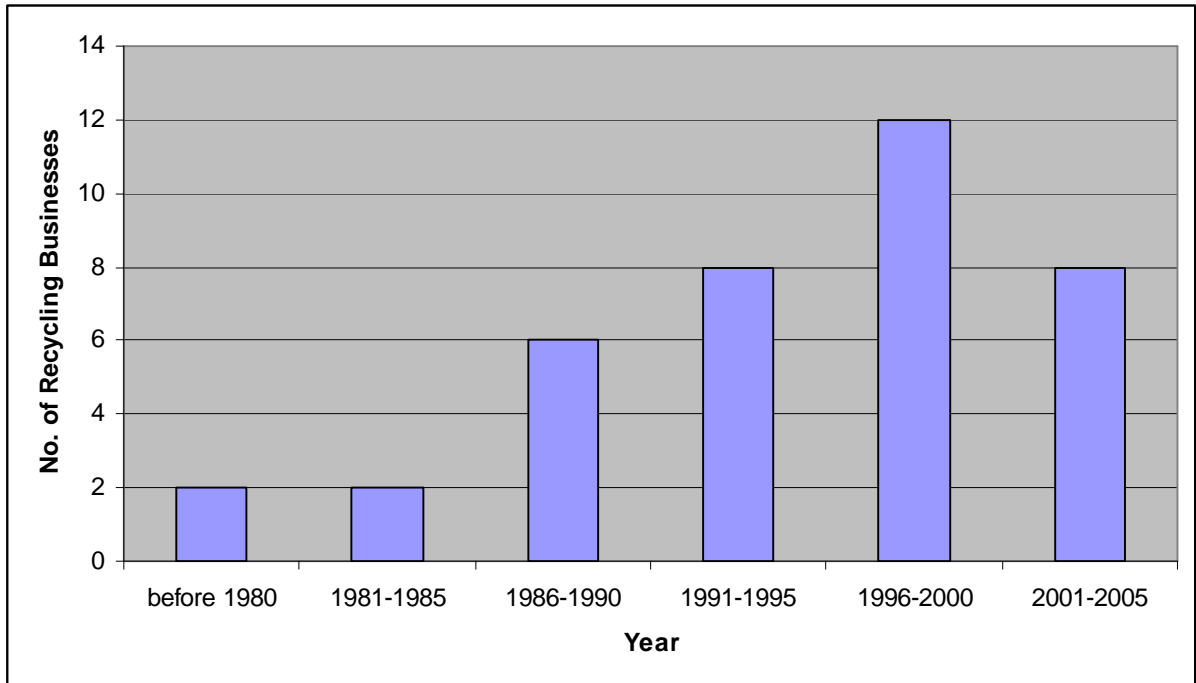


Figure 4.2: Growth in the Number of Recycling Businesses

Additionally, there was an increasing public demand in green products (Nybord *et al.*, 2006; Gilg *et al.*, 2005; Mackenzie, 1990). It may be the growing emphasis on environmental sustainability which urged the entrepreneurs to adopt this behaviour. On the other hand, it may be their interest in supporting the social nature of the recycling businesses (Daracha, Forbes, Kamden, Tavion). Also this may be attributed to the better quality of recycled products, for example: 'comfy-sleep' made from recycled quality cardboards supplied by RB19's neighbour company is considered to be superior animal bedding. However, Henderson has pointed out that the Government's decision to impose higher taxes on virgin products has helped them because it directed consumers to recycled products. Beiste's and Renaldie's franchises and Brody's amazingly low price for recycled protectors are other examples of instances where recycling operations have fulfilled the need for relatively well priced products when

compared to virgin products. Thus, it may be contended that consumers' increased demand for green products is not necessarily spurred by green aspirations. Nevertheless, what is noted here is that there is a sustained increase in demand for green products.

The above mentioned environmental conditions enhance the perception of the opportunity (Davidsson, 1991), the entrepreneur's propensity and ability to enterprise (Gnywali and Fogel, 1994) and increase the desire to start the business (Begley *et al.*, 2005). This has played an important part in the start-up of most of the recycling businesses included in this study and made possible the manifestation of the entrepreneurs' individual quests. The next part describes the entrepreneurship scene in the recycling industry.

4.4.1.1 Entrepreneurship

The environmental conditions mentioned above apply to both for-profit and not-for-profit sectors of the recycling industry. For example, local authorities are obligated to meet imposed recycling targets. This is one of the reasons for the start-up of community recycling projects which have resulted in the business-like ventures in which Daracha and Forbes are involved. Other examples include the start-up of RB8 and RB11 following the problems experienced by Shell and Aberdeenshire Council in disposing of wood waste; and Moray Council's problems in disposing of old computers which created opportunities for both Kamden and Tavion to be socially entrepreneurial whilst applying their technical skills.

On the other hand, expansion of business activities for Jock's existing haulage business was a result of his decision to diversify his existing business to include the collection and transfer of Moray Council's waste. For Gilmore, who currently owns the only composting site in the North East of Scotland, it all started with that pile of green waste lying on the grounds of the Aberdeenshire Council site in Mintlaw. For Carlton, it was due to the fact that his existing end-of-life vehicle recycling business needed to find a way to recycle tyres and to divert them from landfill.

Figure 4.3 depicts the proportion of for-profit and not-for-profit involvement in the recycling industry in the North East of Scotland. The for-profit sector accounts for 78% of recycling businesses and the not-for-profit sector accounts for the remaining 22%.

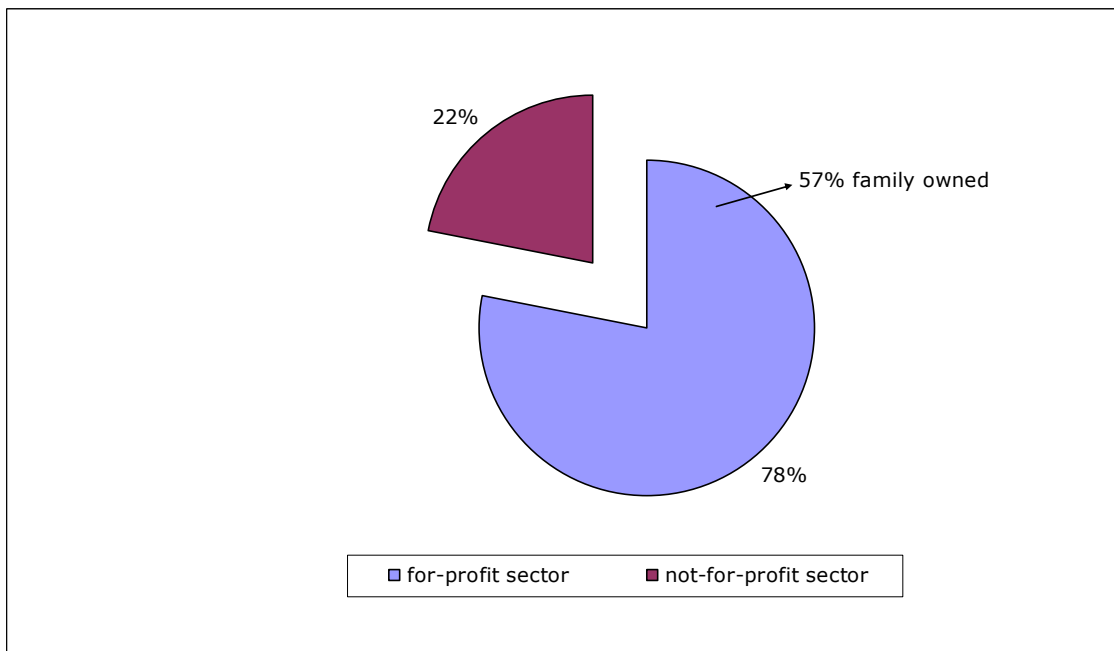


Figure 4.3: For-Profit and Not-for-Profit Sector Involvement

It also appears that the industry is dominated by family-owned businesses (57%) which have less than 10 employees. In a way, this explains the dominance of SMEs in the industry. Statistical data following findings from the basic questionnaire revealed that the recycling industry is characterised by micro enterprises (less than 10 employees) comprising a majority of family owned enterprises and small enterprises (10-49 employee). Both forms of enterprises account for 97% of the industry. 55% of them are micro enterprises and 42% are small enterprises¹⁹(see Figure 4.4).

¹⁹ For this purpose, only the number of employees in the foreign based IWMCs in the region has been accounted. These businesses fall under the 10-49 category as opposed to more than 250 employees if the total number of employees for the group as a whole is taken into account.

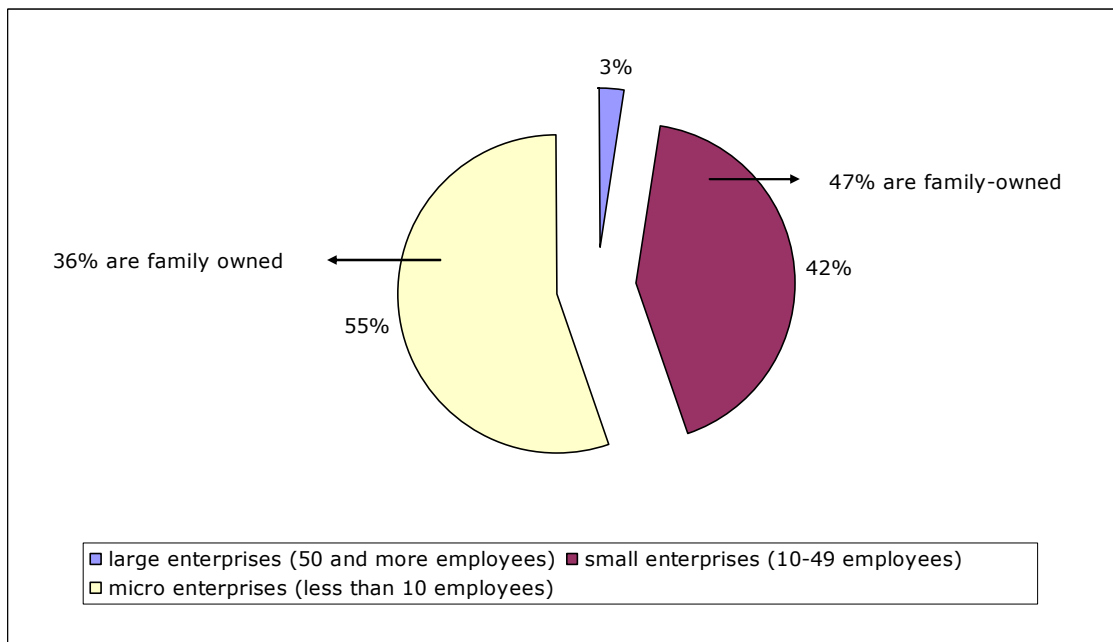


Figure 4.4: Dominance of Micro and Small Enterprises

It should also be mentioned that the 3% representation of large enterprises refers to one recycling business which was undergoing its closure programme at the time of the fieldwork and was subsequently closed. This demonstrates the significance of entrepreneurship (as opposed to intrapreneurship) in the recycling industry. Accordingly, it supports the point that the contextual opportunities have been tapped (see Figure 4.2) and seems to suggest a likelihood of growth in entrepreneurship. Some of the informants' experiences support the latter. As mentioned in Section 4.3.4.3, Kyrk and Sutherland were prompted to start their recycling businesses having observed similar businesses in their localities. Furthermore, Irvine who was General Manager of the closed large enterprise intimated that if self-employment became an appealing option after the business's closure, he would favour an entrepreneurial venture into glass recycling. He added that the idea was motivated by his observation of the creativity of entrepreneurs in Shetland.

Thus far, this Section has demonstrated how social, political and economic strands interplay and form a favourable spatial context for entrepreneurial opportunities. However, it may be argued that not all conditions in the

environmental context necessarily support this formation. In Sections 4.3.1.1 and 4.3.4.1, it was shown that there is a generic norm amongst the public who are increasingly keen to recycle. Nonetheless, the following account shows that this is debatable.

Kyrk, Sima and Tavion voiced frustrations in getting the public to understand that recycling was costly and therefore they needed to pay for their items to be recycled. Research shows that although people generally welcome the idea of recycling, many are not willing to pay to get their items recycled (Lake *et al.*, 1996). From another perspective, regulations have also made the proper disposal of certain items by householders compulsory. This means that skips need to be hired if required.

The above notwithstanding, the public does not have a significant influence on the levels of supply and demand for the recycling services. The biggest source of supply of waste materials for recycling businesses in the North East of Scotland is the offshore industry. The next sub-section considers the impact of the offshore industry on the characteristics of local recycling businesses.

4.4.1.2 Impact of the Offshore Industry

Informants from Aberdeen City and Shire from both for-profit and not-for-profit sectors have claimed that their recycling businesses are highly reliant on the offshore industry. In addition to the associated landfill costs mentioned above, the growing popularity of the ISO 14000 series and triple bottom line notion in 1990s spurred larger companies to obtain and adduce tangible evidence of social and environmental responsibilities. In an oil rich region like the North East of Scotland these practices are prevalent in the offshore industry. Apart from construction wastes which come from the construction industry most of the waste materials are either collected from or sent to recycling businesses by oil companies or integrated waste management companies.

In the North East of Scotland, it was found that the majority of the integrated waste management companies are global waste management

specialists with headquarters based in other parts of the world. Integrated waste management reprocessing sites are also seen as a cost saving avenue and an alternative to landfill. They serve as avenues for managing waste generated by the oil and gas industry.

The high reliance on the offshore industry for their supply of recyclables is depicted in Figure 4.5 which shows that the top five materials recycled throughout the North East of Scotland are metal (12%), plastic (9%), wood (9%), aluminium cans (8%) and paper and cardboard (8%). The offshore industry supplies these waste materials. Figure 4.5 highlights that the total percentage of recycling activities involving the top five waste materials is 46 %, which underlines the fact that these five material streams dictate the recycling activities in the region. Additionally, the other 54% of recycling activities are represented by 17 out of the 22 waste material streams.

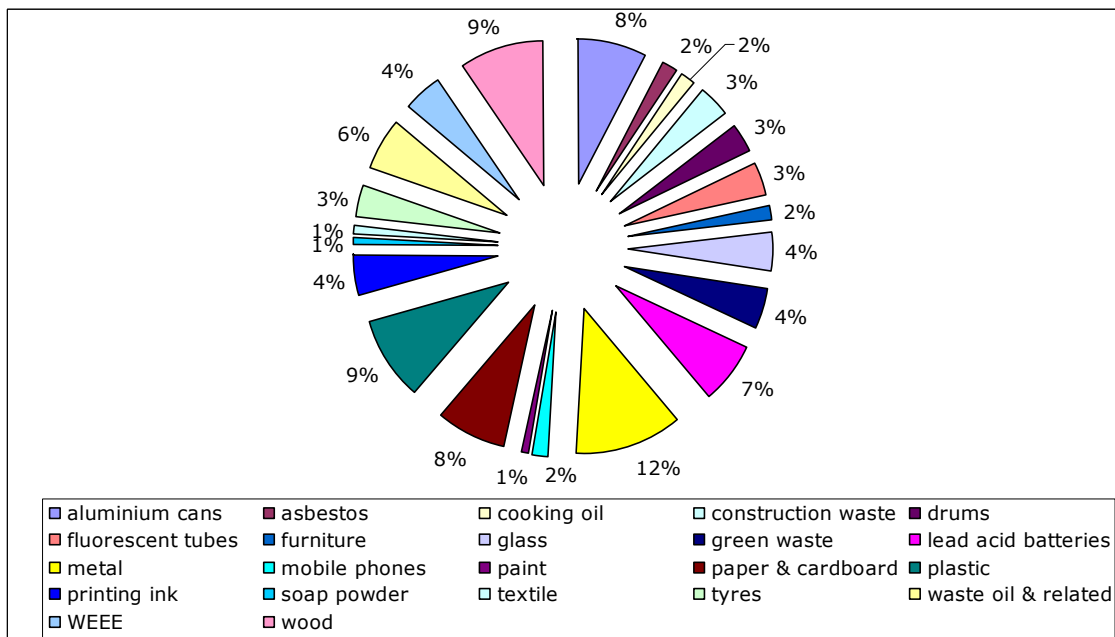


Figure 4.5: Breakdown of Recycling Activities by Waste Material Stream

Furthermore, Figure 4.6 shows that the majority of recycling activities are located in Aberdeen City and Shire. These two unitary councils dominate the recycling of the earlier mentioned five waste streams and represent the areas in which the offshore industry is based.

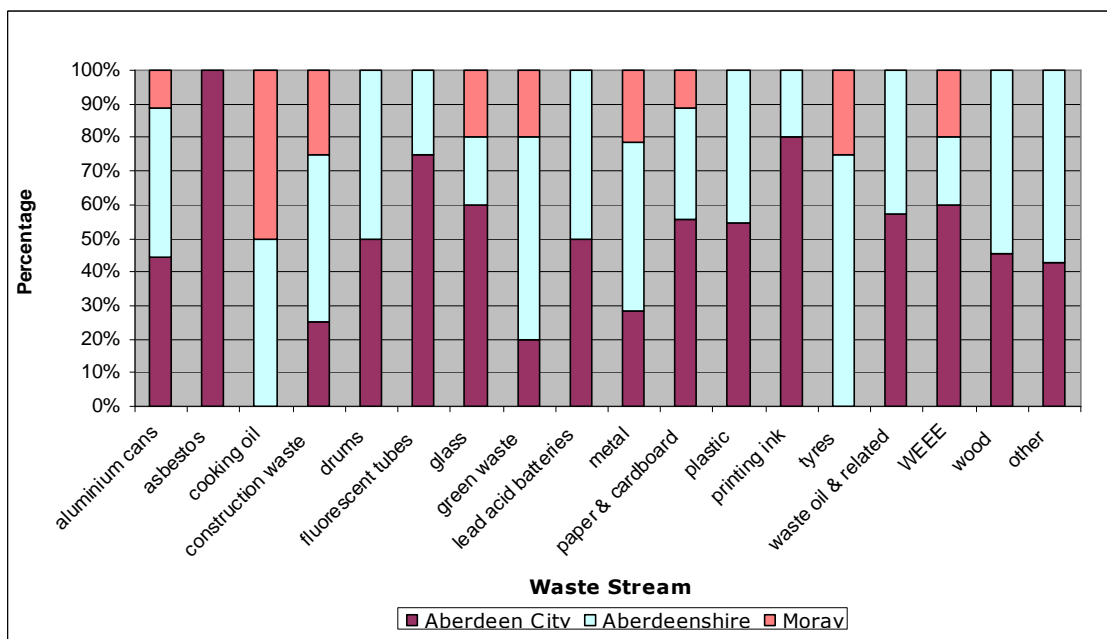


Figure 4.6: Location of Recycling Activities by Waste Material Stream

These primary waste material streams are also found in the recycling industry in other parts of the UK. However, the sources of waste materials in other parts of UK appear to have more varied sources of supply with no obvious slant towards any particular industry.

Another distinctive feature of the recycling industry in North East Scotland, compared with other parts of the UK particularly England, lies in the types of recycling operations that are carried out. They appear to be more advanced on the basis that one is likely to find more intermediate reprocessing and final product operations. The next paragraphs elaborate further on this point.

Within the context of this study, recycling operations are categorised into three types. The first type is termed 'transfer' which involves material segregation, sorting, compacting, baling and subsequent transfer for further reprocessing. The second type is termed 'intermediate reprocessing'. Here, the waste materials are broken into smaller sizes, or re-moulded into different forms and sent as feedstock to a final re-processor for transformation into a recycled product fit for use by the end-consumer. The

third type is termed 'final product'. These are waste materials that are fully recycled into a usable product by the end consumer.

It might be helpful to mention that the flow of the above mentioned activities have been depicted in Figure 4.1. However, the crucial point of this issue is that it was a common practice for the informants engaged in transfer and/or intermediate reprocessing to send their recycled products down South for the final product stage. This depicts a slant towards transfer oriented rather than transformation (intermediate reprocessing and final product) or treatment oriented recycling activities. For example, under hazardous waste there is 100% transfer for asbestos, fluorescent tubes, lead acid batteries and mobile phones. Under general waste, there is 100% transfer out of the North East of Scotland for aluminium cans, glass, furniture, paint and textiles (see Figure 4.7).

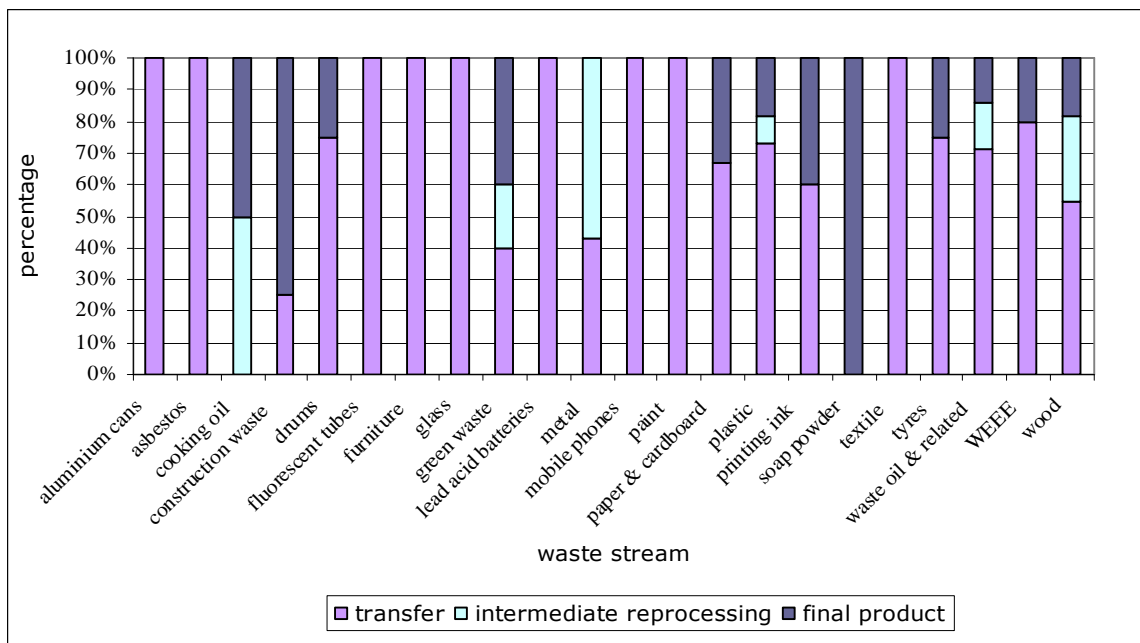


Figure 4.7: Types of Recycling Operations by Waste Material Stream

Furthermore, basic descriptive statistical findings reveal that the majority (71%) of the recycling activities are transfer, 12% intermediate reprocessing and 17% final product. This comprises eighteen out of the

thirty-eight companies under the study, 33% of which are integrated waste management companies (see Figure 4.8). The waste collection and transfer operations is one provision of environmental solutions to waste disposal problems faced by the major players in the oil industry such as Shell, BP and Mobil. Some integrated waste management companies have put ad hoc skips in manufacturing areas. These skips also help to collect waste from other commercial companies. However, the main source of waste materials comes from the offshore industry.

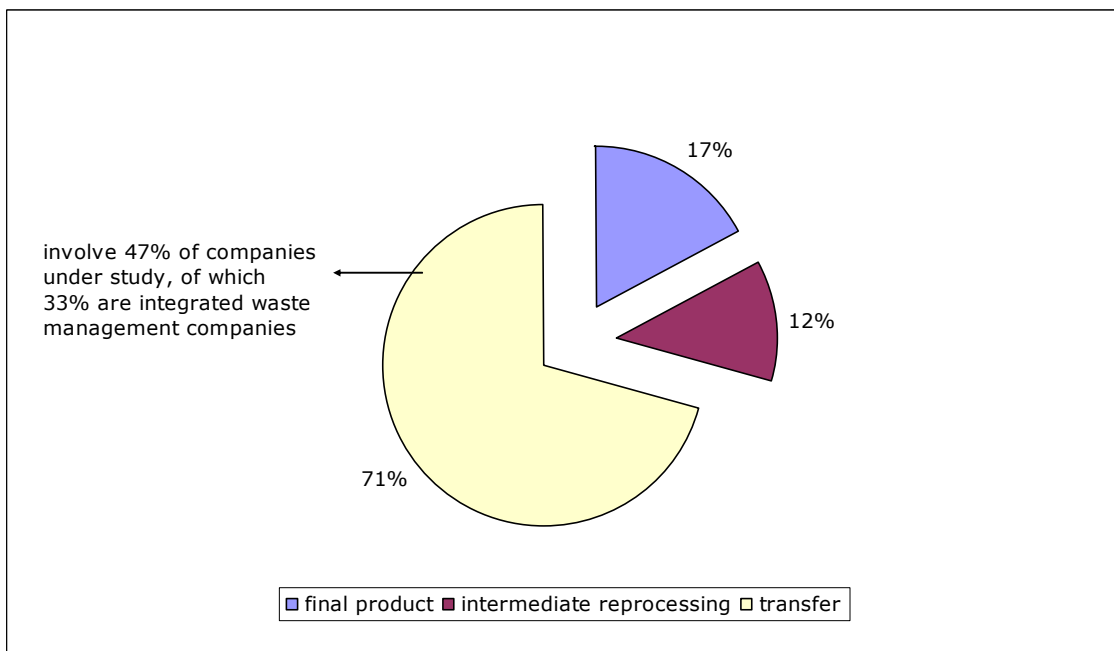


Figure 4.8: Types of Recycling Operations

The dominance of transfer relative over transformation (intermediate reprocessing and final product) operations is further articulated in Figure 4.9a and Figure 4.9b.

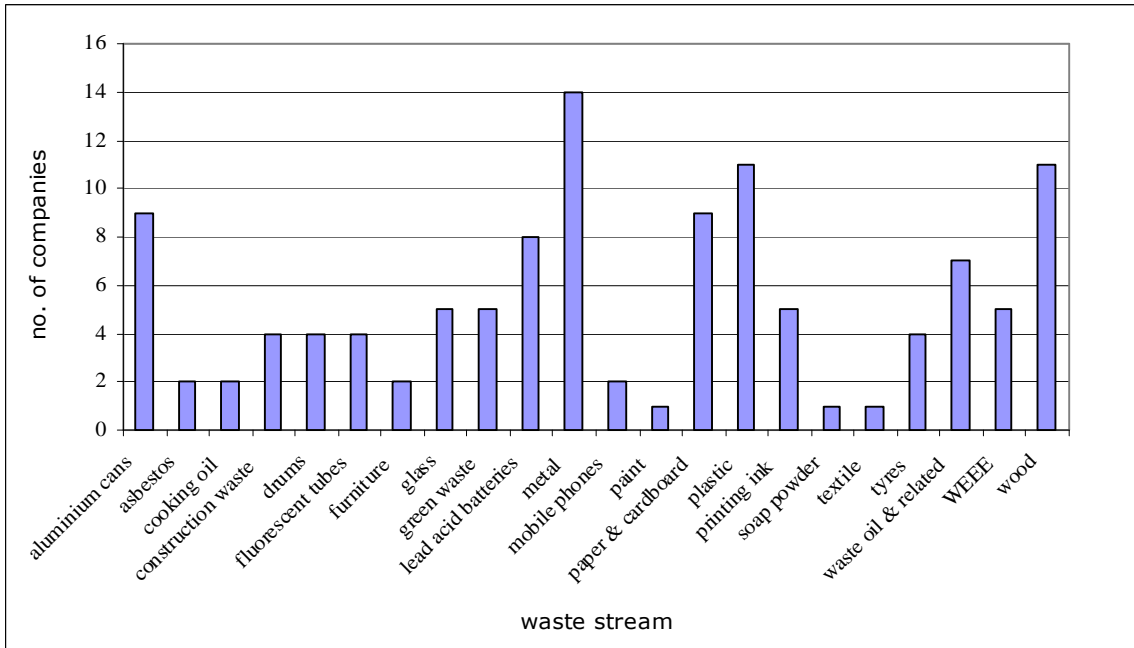


Figure 4.9a: Overall Recycling Activities by Waste Material Stream (Including Transfer)

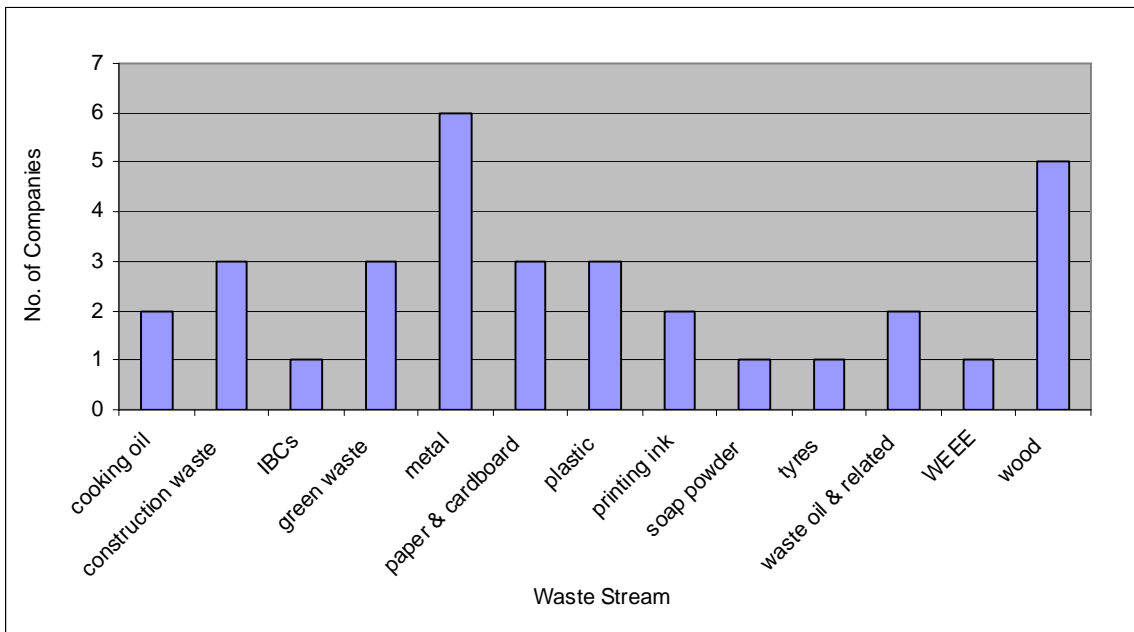


Figure 4.9b: Overall Recycling Activities by Waste Material Stream (Excluding Transfer)

Figure 4.9a depicts the overall waste recycling activities at all three levels of recycling operations. In Figure 4.9b, all the waste material streams which comprise waste materials for mere transfer have been excluded. The results

show a reduction of recycling businesses from 38 to 25, and the number of waste material streams from 22 to 13. Additionally, the total number of recycling operations in the industry reduced significantly from 116 to 33.

The foregoing suggests that the recycling industry in the North East of Scotland is significantly influenced by the offshore industry. This is reflected in the predominant waste material streams, the integrated waste management companies which dominate the operations scene and consequently the slant towards transfer rather than transformation recycling operations. Thus, we have seen how the context in which the recycling industry operates in is formed. The next Section will argue that the context is a green structure.

4.4.2 Green Structure

Thus far, we have seen that the context in which the recycling industry operates is embedded in an environmental context whereby social, political, economic and cultural factors dynamically interplay. Indeed, the social, political and economic strands in the environmental context arose out of green concerns. In the first instance, social demands pertaining to environmental concerns are essentially green. These demands gave rise to political responses which are essentially responses to green concerns. These responses have in turn given rise to economic impacts and socio-cultural changes in the context. Firstly, there are severe implications on the economics of recycling through high landfill charges and taxes. This played an important part in diverting business and householder waste from landfill and led many players to seek alternative means of disposal.

The recycling industry has emerged as an alternative solution with increasing demands for recycling services. Secondly, it plays an important role in developing a culture that fosters a greater appreciation of recycling and increasingly value waste as a resource. The findings in this Chapter therefore suggest that it is under these circumstances that the context in which the recycling industry is formed, and its specific characteristics are played out according to the nature of space.

The findings in this Chapter also demonstrate that the recycling industry operates in an enduring green structure that is embedded in a socio-(political)-economic context. This context arose from green concerns (social) and responses to the green concerns (political) which gave rise to economic and socio-cultural implications. In turn, this created economic needs and socio-cultural changes conducive to the availability of entrepreneurial opportunities.

4.5 Summary and Conclusion

This Chapter has started off the analytical process of this research with a context-level analysis to understand the nature of the structure. It is guided by a sub-research question: what is the nature of the recycling industry. The analysis was carried out following a three-stage step-by-step progressive understanding of the formation of the structure. Table 4.4 summarises and highlights the key findings at each stage of the analysis.

Stages of Analysis	Key Outcome of Analysis	Highlights
Explore how the recycling industry operates	Panoramic view of the recycling industry	Multiple roles Key role: landfill diversion Contrasting cultural settings
Explore the social, political and economic strands	Environmental context: Interplay between strands and the production of green culture	Social concerns on environmental issues gave rise to political responses which had socio-economic and socio-cultural implications; in turn, this produced a green culture
Explore how characteristics of local recycling businesses are created	Spatial context: Interplay between strands and culture manifest within the particularities of the North East of Scotland	Green structure Contextual opportunities

Table 4.4: Summary of Analysis at the Context-level

Conclusion:

The recycling industry operates in an enduring green culture and structure. That is to say, it is embedded in a socio-(political)-economic context: a

context which arose from green concerns (social) and responses to the green concerns (political) which gave rise to economic and socio-cultural implications. In turn, this created economic needs and socio-cultural changes which made available contextual opportunities to be tapped by entrepreneurs. Furthermore, the availability of both financial and social opportunities, the different roles, ownership types and stakeholding structures seem to suggest contrasting cultural settings within an apparently unanimous green culture and structure in which the industry operates.

Chapter 5 will proceed with an entrepreneur-level analysis. It will seek to understand the way the entrepreneur thinks; particularly how his or her background configures the idiosyncratic entrepreneurial process (Anderson, 2000). This is because this study's interest in the recycling entrepreneur is less of who he or she is and more about what he or she does (Gartner, 1985) and how he or she does it.

CHAPTER 5

VALUE ORIENTATION AS AN EMBEDDED ENTREPRENEURIAL PROCESS

5.1 Introduction

As discussed in Chapters 2 and 3, the scope of this study encompasses process and context; and that the present quest to understand what is really going on in the recycling industry is to locate the recycling entrepreneur in his or her context. Following that, the previous Chapter focused on the contextual aspects to develop insights into the nature of the recycling industry. It also showed that the recycling industry is multi-faceted. This is reflected in its multiple sectors, multiple waste streams, and multiple types of recycling operations and businesses. The present Chapter focuses on analysis at the entrepreneur-level. This is not tantamount to focusing on his or her attributes. Rather, the analysis interrogates the micro issues raised in the modern traits theory namely the cognitive (Baron, 2004) and affective processes (Goss, 2005) which are present under the entrepreneurs' circumstances (Chell, 2009). The Chapter is guided by a sub-research question, 'What is the nature of the recycling entrepreneur's motivation, behaviour, decision and action?'

The relationship between the entrepreneur and opportunities, or the phenomenon of entrepreneurship and opportunities have been emphasised in the literature. Stevenson and Jarillo (1990) for example, posit that the core of entrepreneurship is the pursuit of opportunity. Thus, potential entrepreneurs must have an entrepreneurial mindset that enables them to recognise opportunity and perceive entrepreneurial activities as both desirable and feasible (Hisrich and O'Brien, 1982). In Chapter 4, it was shown that opportunities are indeed available in this context. Hence, the analysis in this Chapter takes the recycling opportunity as a first point of departure.

In a first instance, this enables the researcher to distinguish between informants who are entrepreneurs from those who are not. The non-entrepreneur recognises it merely as a job, or task to be carried out. This is

evidenced in the study's sample of employees (Cameron, Carnegie, Donald, Irvine, Jackson and Stuart) who were employed within specific job scopes. They were assigned to specific tasks and were only concerned with the roles and responsibilities that were incidental to their tasks. As such, they did not engage in the recycling business in its own right but in jobs in the recycling industry for which they were duly remunerated. For them, it was merely about job opportunities.

On the other hand, the recycling entrepreneur recognises the recycling opportunity as an opportunity in which they may act, either to put into practice one or more of the values they hold or to potentially realise one or more values that the opportunity is believed to provide. This is especially interesting within the context of the recycling industry. There is a great variety of recycling entrepreneurs in terms of background, experiences and interests. This multiplicity may be said to be a reflection of the different ways in which they see and understand the world or simply, their orientation. They are drawn to attach the idea of the recycling opportunity to a value(s) that they perceive the opportunity can use or provide.

Thus, in a second instance using the recycling opportunity as a first point of departure to understand the recycling entrepreneur acknowledges the differences in his or her orientation. The prevalent uniqueness of the recycling industry is reflected in the different ways of perceiving and exploiting the recycling opportunity. This means that the issue is less a question of opportunity to be discovered (Shane, 2000) but rather, how it is created (Sarason *et al.*, 2006). In other words, understanding entrepreneurship in the recycling industry needs to move beyond the mere ability to recognise or identify an opportunity. More importantly, the researcher needs to understand how and why entrepreneurs in that one recycling industry perceive that one recycling opportunity differently. This necessitates the development of insights into the entrepreneur's construction of the recycling opportunity.

Accordingly, the purpose of this Chapter is to provide a descriptive account of what is going on during the entrepreneurs' constructions of the recycling opportunity. This account will serve as a foundation to understand how the recycling opportunity happened to be constructed in a particular way for an individual entrepreneur (or in different ways by entrepreneurs in the recycling industry). It simply addresses 'what is really going on' using 'what he or she is saying' and 'why he or she is saying that' as guidelines and by staying as close as possible to the data originally recorded (Wolcott, 1994). How it happened to be that way is the emphasis of Chapter 6.

The first step taken was to develop an organising framework which provides progressive focusing for continuing analysis. It proved to be a far more complicated process than expected. Primarily, this was due to the researcher's excessively stringent adherence to be inclusive thus resulting in an 'all-inclusive' attitude in her consideration of the most appropriate categories to segment the data. Inevitably too, the multi-faceted nature of the recycling industry and the overload of unstructured raw data contributed to these complications. Nonetheless, the complexities were straightened out during the descriptive and analytical journey by constant referencing and reminders of the purpose of the study and the immediate purpose of the descriptive account.

Further, whilst thematic charting succeeded in identifying emerging patterns in which data may be categorised to provide useful insights into the recycling entrepreneur's opportunity construction, it was difficult to apply definitive boundaries to separate categories; an unavoidable issue due to the qualitative nature of the inquiry. Underlying elements such as values, ambitions, and aspirations shape and direct the way the entrepreneurs think, behave, decide and act. Yet, there are no clear boundaries or definitive patterns which relate these underlying elements to the entrepreneur's motivation, behaviour, decision and action. Additionally, the change in patterns of opportunity construction over time following the change in the way values are attached to the recycling business also meant difficulties in the segmentation of data into primary categories in order to develop an organising framework for progressive focusing. In view of these

issues, the researcher deemed it useful to set her own boundaries and define categories according to the set boundaries whilst noting the overlapping characteristics; and to provide a separate account for changes in value orientation over time.

The presentation of this Chapter is structured as follows. The next Section 5.2 provides initial reflections pertaining to the segmentation of data into primary categories. It begins with a description of the originally considered categories which were eventually disregarded, with an explanation of their weaknesses. The decision to adopt a typology based on value orientation namely social, financial, green and entrepreneurial value orientation is then explained. Some caveats are also highlighted. Following that, Section 5.3 presents each element of the value orientation typology which distinguishes the different types of recycling entrepreneurs. This is supported by in-depth illustrations of these four value orientations. Sections 5.4 and 5.5 consider the hybrids and the change over time in value orientation. Finally, Section 5.6 summarises and concludes the Chapter.

5.2 Creating Typologies

During the early stages of the study when secondary research was conducted to collate an augmented database of recycling businesses, it was found that recycling businesses are present in both the for-profit and not-for-profit sectors. Whilst this may provide an explanation of some aspects of the recycling industry, it does not shed light on the core interest of this study. Furthermore, one of the unique features of the recycling industry is the different ways in which values are attached to the recycling opportunity thus resulting in different kinds of opportunity perception and exploitation. Identifying recycling entrepreneurs operating in the for-profit sector as generally inclined towards financial goals and those in not-for-profit sectors concerned with social and community benefits is fairly straightforward. However, categorisation according to these primary sectors cannot assist in understanding the ways in which recycling opportunity may be constructed. The entrepreneur's orientation, the approach adopted during exploitation of the opportunity and the changes that took place over time do not necessarily fall neatly into for-profit and not-for-profit categories. For

instance, a recycling entrepreneur in the for-profit sector may be inclined towards extracting a perceived social value attached to the recycling opportunity. Similarly, a recycling entrepreneur in the not-for-profit sector may start off with social intentions but subsequent interactions may increase his or her sense of the environmental and financial importance of his or her business. Thus, it has not been possible to organise the different ways of perceiving and exploiting the opportunity according to these sectors. In this regard, the empirical data underscores ambiguities in setting the boundaries between the different strands in entrepreneurship (as discussed in Chapter 2). The required organising framework must be one which can assist in the development of insights into the entrepreneur's construct of the recycling opportunity and categorisation of recycling entrepreneurs according to the sector in which they operate is unable to fulfil that requirement.

5.2.1 Segmentation of Opportunity Construction according to Value Orientations

Data collected indicates that the entrepreneur attaches the idea of recycling opportunity to a particular value that they perceived it can use or provide. The data suggests that individual entrepreneurs' values, ambitions and aspirations configure the way he or she sees, understands and is motivated by the recycling opportunity. However, these patterns are not dependent on the cultural setting of the for-profit or not-for-profit sector. These patterns are reflected in their previous experiences, thoughts and actions. This suggests that it is a combination of the individual's relationship with his or her social context (Fletcher, 2006) and his or her cognitions (Krueger, 2000; Krueger, 2003). Thus, this is an issue of the individual's social construct rather than a wider cultural phenomenon or firm behaviour. This way of attaching value to the recycling opportunity is termed 'value orientation' in this study.

Value orientation gives a first point of departure to satisfy an understanding of the enactment journey for the recycling entrepreneur. It serves as an ingredient in the construct of his or her entrepreneurial opportunity recognition and motivation to exploit the opportunity recognised. If the

entrepreneurial orientation lies in the individual's orientation to see and act on opportunities, then value orientation gives an ideation (Chell, 2009) to those opportunities while value perception underlying the value orientation configures the idiosyncratic entrepreneurial process (Anderson, 2000a). The entrepreneurs' value orientation needs to be sufficiently accounted for in the researcher's quest to understand their entrepreneurial experience. The researcher therefore rejected her initial strategy of categorising the recycling entrepreneurs according to the primary sectors. Instead, categorisation according to the different value orientations was seen as a feasible organising framework for the purposes of structuring the data, and potentially providing analytical insights for the research question.

There are different ways in which this configuration takes place, hence resulting in different value orientations. Some entrepreneurs weigh social benefits heavily (Forbes, Daracha, Kamden, Tavion) while others emphasise financial rewards (Brody, Brian) and environmental good (Iver, Garry). These underlying elements orientate them to look and act on the recycling opportunity accordingly. They perceive and exploit the opportunity in line with these underlying elements, which is reflected in their behaviour, thoughts and actions.

To a certain extent, the fieldwork experience by itself may lead the researcher to identify the type of value orientation present in the recycling entrepreneur. This is derived from observations of their behaviour, expressions and intonations. For example, this can be gauged by the excitement when speaking about service users' behaviour or the informant's fondness in the tone of their voice when speaking with them. The sparkle in Daracha's eyes when she expressed the joy of making a positive difference to the life of service users and Forbes's excitement about the service users' progress and constant emphasis of their needs both suggested the presence of a social value orientation. On the other hand, the slow, soft and deep voice of Sutherland when he expressed his pride in seeing his business flourish suggested an entrepreneurial value orientation.

Data have also shown that entrepreneurs may differ in their value orientation. Four core forms of value orientation have been identified amongst the entrepreneurs in this study. The Typology of Recycling Entrepreneurs (Table 5.1) comprises four types i.e. social, green, financial and entrepreneurial value orientation.

Value Orientation	Definition
Social Value Orientation (SVO)	A way of seeing and understanding the recycling business as an opportunity to perform a social deed. It is reflected in the inclination to think, see, understand, be motivated, behave, decide and act so that the opportunity is utilised to contribute to a specific community/ society at large in some way.
Green Value Orientation (GVO)	A way of seeing and understanding the potential/existing recycling business as an opportunity to do environmental good. It is reflected in the inclination to think, see, understand, be motivated, behave, decide and act so that the opportunity is utilised to contribute to environmental sustainability.
Financial Value Orientation (FVO)	A way of seeing and understanding the recycling business as an opportunity to generate income. It is reflected in the inclination to think, see, understand, be motivated, behave, decide and act so that the opportunity is utilised to make money.
Entrepreneurial Value Orientation (EVO)	A way of seeing and understanding the potential/ existing recycling business as an opportunity to entreprende. It is reflected in the inclination to think, see, understand, be motivated, behave, decide and act so that the opportunity is utilised to fulfil self-employment purposes, adherence to familial influence in entrepreneuring, as an alternative to diversifying existing businesses or simply to be innovative.

Table 5.1: Typology of Recycling Entrepreneurs (Source: Author)

There is a sense of familiarity about the Typology of Recycling Entrepreneurs shown above because the different value orientations form parts of existing models of social, green and commercial entrepreneurship. The definition of social value orientation portrays the creation of social wealth (Zahra *et al.*, 2009), implies that recycling entrepreneurs under this category are motivated by social objectives (Harding, 2004) and are focused on social value creation (Mair and Marti, 2006; Peredo and Mclean, 2006). On the other hand, the definition of green value orientation takes the straightforward link with sustainability (Harbi *et al.*, 2010) of an ideal

green entrepreneur (Isaak, 2002). There is no issue of overlapping characteristics and ambiguities between the different strands that exist in entrepreneurship research (Chapter 2). At the current level of analysis, the issue of interest is not so much the phenomenon of entrepreneurship but the recycling entrepreneur's **inclination** to think, see, understand, be motivated, behave, decide and act in a particular manner which distinguishes one category from the other. This approach helps to avoid the limitations of existing models of the different strands and considers the entrepreneur as an individual in his or her own right rather than an individual connected to a pre-conceived idea of a 'likely' entrepreneurship phenomenon.

Whilst social and green value orientations may be linked to the budding notions of social and green entrepreneurship, the scope of financial and entrepreneurial orientations seem to be linked to the mainstream entrepreneurship literature. It may be argued that since all the informants are entrepreneurs they all possess entrepreneurial value orientation. Nonetheless, as noted above, what is important here is the entrepreneurs' **inclination**. For example, the entrepreneur with social value orientation may be innovative but innovatively social (Alvord and Letts, 2004). It is also worth noting that the mainstream entrepreneurship literature tends to relate entrepreneurship to economic wealth creation and therefore profit-making. Perhaps this started off with Schumpeter's (1961) emphasis on financial reward in entrepreneurship. As the field developed, scholarly views have expanded to show the non-financial motivators in mainstream entrepreneurship (Douglas and Shepherd, 2003). More recently, Chell (2008) found that the aspiration to attain great wealth was not a motivator for seven out of eight cases of entrepreneurship. In this analysis, the test is again one of inclination i.e. whether or not an entrepreneur is categorised as entrepreneurial value orientation or financial value orientation bows down to the issue of **inclination**.

It is also highlighted that for the purposes of this study, value orientation refers specifically to the context of recycling opportunity. It is an internal configurative process which takes place within the entrepreneur, which

draws him or her to a way of seeing, perceiving, understanding and be motivated by the recycling opportunity; thus leading to and shaping the construct of the recycling opportunity. Previous studies on commercial, social and green entrepreneurship have often linked these notions with financial, social and green values in the ideation of opportunities and the consequent financial, social and green motives, respectively (see Section 2.5.1). It thus appears that values and/or value perception (Anderson, 2000a) or value recognition (Chell, 1997) is a useful tool for examining the relationship between the entrepreneurs and the recycling opportunity.

However, the data in this study also suggests that the entrepreneur's approach, beliefs, views and values about life which may be portrayed in the way he or she manages the recycling business and do not necessarily suggest a particular value orientation (within the context of the recycling opportunity). These caveats are elaborated in the next sub-section in order to avoid possible confusion and to further articulate the meaning of each type of value orientation.

5.2.2 Caveats

Whether or not an entrepreneur possesses social value orientation, does not depend on whether he or she possesses social values, or he or she shows concerns in social issues, or is satisfied with and enjoys the business because has benefited society in some way. It is not about these satisfactions, prides and concerns. It is about a way of seeing the opportunity and the corresponding approach to exploiting the opportunity that follows the recognition. There are four main caveats highlighted in this Section: the difference between social value orientation and social responsibility; financial value orientation and rationalities; green value orientation and environmental friendly practices; and entrepreneurial value orientation and entrepreneurial qualities (Table 5.2).

Value Orientation	Caveats	
	Description	Examples
Social Value Orientation (SVO)	Social responsibility	Kyrk (EVO)
Green Value Orientation (GVO)	Environmental friendly practices	Ramsey (FVO) Skene (EVO)
Financial Value Orientation (FVO)	Rationalities	Tavion (SVO) Sutherland (EVO)
Entrepreneurial Value Orientation (EVO)	Entrepreneurial qualities	Gilmat (FVO)

Table 5.2: Typology of Recycling Entrepreneurs: Caveats (Source: Author)

Thus, the practice of social responsibility or environmental friendly practices may be deemed to portray social and green entrepreneurship in the extant literature. However, these practices may not necessarily reflect social and green value orientations within the context of this study.

Kyrk possesses social values in that he cares about societal issues, engages in charitable acts and practices social responsibility. However, the value he sees in the recycling opportunity is essentially an opportunity to diversify from his existing farming business. Thus, in the context of this study, Kyrk has an entrepreneurial value orientation with social values.

Rationalities exist when an entrepreneur emphasises profit but from the perspective of sustaining or growing the business. It is a requirement to continue the business. Realistically, rationalities are therefore needed to stay in business irrespective of the motive or value recognised. It may be an influencing factor in the entrepreneurs' decision-making. However, it neither changes the way in which they perceive the opportunity in the recycling business nor their response to realise that opportunity.

Tavion:

...most voluntary organisations will never ever generate enough income to be financially sustainable in their own right... they are always looking for more money.

Sutherland:

Little guy, how can he survive? You've got the bills come in you pay it. We couldn't do more. So effectively you are running to stand still. Well...you do get a bit of profit in there but you do need an extra bit to stand still.

The entrepreneur may be environmentally conscious and behave or act in environmentally responsible ways. Also, some environmentally friendly practices have been made compulsory through the Environmental Protection Act 1990 and other environmental regulations, which may be understood as social phenomena. However, similar to the aforementioned, this cannot be treated as a green value orientation if it has not been practiced in line with the way in which the opportunity has been perceived or the way the entrepreneur has been motivated-

Ramsey:

...other people just flush materials just down the drain. We don't do that, we are completely environmentally friendly.

Skene:

...even these (stamping his feed on the base of the shed) are all recycled.

Equally, although Skene emphasises the steps he has taken to reduce the environmental impact of his business, we can also note that he joined partnership with his brother-in-law because he was unemployed; and later on became more concerned about the business providing jobs for the youngsters.

The fact that informants are recycling entrepreneurs implies that they possess entrepreneurial qualities, regardless of the type of value orientation. However, the term entrepreneurial value orientation refers to

an orientation to view the potential or existing recycling business as an opportunity to entrepreneur. The word entrepreneur in this context means to be and do what an entrepreneur does. The samples in the study are all entrepreneurs that did entrepreneur. However, it is not necessarily that the recycling opportunity is seen as an opportunity to entrepreneur by all of them. Entrepreneur may be a tool to realise (create or extract) the value perceived (social, financial or green, as the upcoming sub-sections will illustrate) in the recycling opportunity. For example, Gilmat's drive, desire for self-actualisation and achievement suggests that he is indeed entrepreneurial. However, his idea of recycling aggregates was more of a cost-saving strategy to manage waste from his construction business. Gilmat is therefore categorised under financial and not entrepreneurial value orientation.

This Section has provided the background which supported the segmentation of data according to the recycling entrepreneur's value orientation. Drawing on related literature and data collected from fieldwork, it proceeded to conceptualise the meaning of value orientation within the context of this study. Furthermore, issues of social responsibility, rationalities, environmental friendly practices and entrepreneurial qualities have led to various considerations during the data segmentation and analysis processes. The Section therefore closes with these caveats in order to avoid confusion with the typology proposed. The next Section gives detailed descriptive accounts of the different value orientation typologies as they were identified in the data collected from informants. The accounts are supported by in-depth illustrations and excerpts of their speech.

5.3 Typologies of Value Orientations

The task of recognising the patterns of value orientation in the entrepreneurs became clearer when the researcher noted three emerging properties which provided useful illustrations to explain a specific value orientation. They are the way of perceiving the recycling opportunity, the underlying motivation for enactment and the manner in which the recycling opportunity is exploited. Each element of value orientation possesses its

own properties within these themes and the properties distinguish one value orientation from the other (Table 5.3).

Value Orientation	Emerging Properties
Social Value Orientation	Related to service users' benefits
Financial Value Orientation	Related to profit making
Green Value Orientation	Related to environmental mission
Entrepreneurial Value Orientation	Related to business growth

Table 5.3: Typology of Recycling Entrepreneurs: Emerging Properties
(Source: Author)

In this Section, the researcher focuses on data which performs the following functions: illustrates a way of seeing, understanding and being motivated; illustrates behaviour, decision and action in accordance with the decision; and illustrates fulfilment, satisfaction, joy and passion in the manner laid out in Table 5.3.

5.3.1 Social Value Orientation (SVO)

Social value orientation is a way of seeing and understanding the recycling business as an opportunity to perform a social deed. It is reflected in the inclination to think, see, understand, be motivated, behave, decide and act so that the opportunity is utilised to contribute to a specific community/ society at large in some ways (see Table 5.1). Forbes, Daracha, Kamden, Skene, Tavion, Struan and Beiste are the entrepreneurs in this study who possess a social value orientation.

Forbes places significance on social values (values related to social/ community benefit). This is exhibited in his involvement in social work for more than 30 years. When old folks' gardens provided insufficient work for his team of 20 people with learning difficulties, he and his team looked at various options related to recycling to create real work experience for

people with learning difficulties. Later, he pursued his role in the recycling business focusing his thoughts, behaviour, decisions and actions on the welfare and needs of the people with learning difficulties.

Furthermore, in the entire two-hour interview with Forbes, the environmental aspects of recycling were never brought into conversation. At the start of the researcher's visit, he drew her attention to a pile of computer parts and expressed disappointment that the legislation has classified those as dangerous waste. As a result, Robbie, a service user who enjoyed 'playing' with them has been prohibited from continuing. Forbes spoke about recycling although his speech was directly related to the benefits of the recycling business for the trainees:

I mean, recycling..... it's a very interesting subject really

With no pauses in between, he added:

I think it's because they want to get involved. These people like to be involved. They don't like to be shut away. I mean they are looking for avenues to be involved within the community, to be seen as equals err and it's certainly done that....

However, the opportunity to perform a social deed takes place in different ways. Table 5.4 presents the typology of social value orientation.

Table 5.4: Typology of Social Value Orientation

Opportunity to perform a social deed		
Patterns of SVO	Evidence	Entrepreneur
Creation of real work experience	Purposively look into options in recycling to provide real work experience for service users/trainees.	Forbes, Daracha
	Constant emphasis on the difference between the recycling business and a day centre for the service users/ trainees.	Kamden

Table 5.4: Typology of Social Value Orientation (continued)

Opportunity to perform a social deed		
Patterns of SVO	Evidence	Entrepreneur
Creation of real work experience (continued)	Continuance of business to provide jobs for the youngsters.	Skene
Emphasis on community/ societal benefits	Delights in the materialisation of benefits to service users/ trainees.	Daracha, Forbes, Kamden
	Prioritisation of workforce interest (more than mere social responsibility): - consideration of individual needs, abilities and enjoyment. - volunteers' knowledge acquisition.	Daracha, Forbes, Kamden
	Contribution to society at large.	Tavion Struan
Desire to offer social service	Social work related background.	Daracha, Forbes, Kamden, Tavion
	Enjoyment of the social nature of the job.	Daracha, Forbes, Kamden
	Expression of gratitude - appreciates the manner in which the service-users have helped them previously and is motivated to help them in a like manner.	Daracha, Forbes
	A chance to offer a customer-focused service.	Beiste

End of Table 5.4

The following discussion provides detailed descriptive accounts of these patterns.

5.3.1.1 Creation of Real Work Experience

Forbes, Daracha and Kamden view the recycling business as an opportunity to create real work experience for people with learning difficulties or general disabilities (service users/ trainees/ clients).

Forbes and his colleagues found that work at the old folks' gardens were insufficient for their team of 20 people with learning difficulties. They saw

the mountains of rubbish and purposively looked into various options of recycling as an alternative work avenue for service users. Whereas Daracha speaks about her desire for BEAT to grow so that the trainees would have more work experience and at the same time create space for more people to join the workforce. Throughout the interview, Kamden emphasised that despite the developments which have taken place in the recycling business, it was essentially a community business offering work opportunities for people with learning difficulties and general disabilities as opposed to merely attending a day centre. This has been his motivation:

I was quite happy to come here because this was even more like real work if you know what I mean...day centre is a wee bit like school. It's like school for people who are not very able you know what I mean so they are learning maybe simple things... they do various craft things and learning, budgeting or simple cooking... err this is more real work in a real working environment, as an alternative for people attending a day centre...

Skene who owns the only wood recycling business in Aberdeen had no intentions of developing it into a big commercial business. With Iver as his partner in the business, they employed five workers: a lorry driver to transport the wood, Matthew (Iver's fourteen year old son) and three of his schoolmates seeking some sources of income during the weekend to work in the site. One of Skene's motivations for keeping the business going despite the critical circumstances which prevailed throughout the 10 years of operation was to provide a job for Sutherland and his friends:

...it's to say to get the kids something to do.

5.3.1.2 Emphasis on Community/ Societal benefits

With Kamden, Forbes, Daracha and Tavion, there has been a general emphasis on the social nature of their involvement in the recycling business or the purpose of the recycling business. For example, Kamden's disenchantment with the Board of Directors' increasing interest in the commercial aspects of the recycling business and emphasis on the business

as a social venture was apparent from the first telephone conversation with him right through the interview:

We will never be a threat to people who want to do the recycling the commercial way. Because we wouldn't be commercial because we don't want to grow bigger...we don't want to become a big commercial company...because we...you know we are here for a different purpose.

As for Tavion, although his involvement was with RB11, a social enterprise with twofold purpose (environmental and social), there is acknowledgement of environmental benefits following the recycling. However, his emphasis throughout has been on the benefits of the organisation to the community as a whole (various aspects of community benefits). The tone of his conversations seemed to suggest that environmental benefits to him were accompanying goals and a fulfilment of professional responsibility in his managerial position rather than an opportunity which can be executed to produce environmental benefits.

As shown in Table 5.4, community and/ or societal benefits have been implied in the data in a few ways. These are the entrepreneurs' delight in the materialisation of benefits to the service users, their prioritisation of workforce benefits and their contribution to the society at large. Illustrations are detailed below.

Delights in the Materialisation of Benefits to the Service Users

Data suggests that service users experience benefits following their work in the recycling business. For example, they have responded positively to a professional image, were able to take part in various aspects of the business and enjoyed the recognition given to them when they attended award dinners (Forbes). It seems that their joy in their ability to do a real job, to see themselves as leading a normal life, and ability to speak about their experience in their homes like the rest of their families has been exhibited in the service users' behaviour, enthusiasm, initiatives and skills. This also seems to be evidenced by the gradual increase in their attendance, advancement to further work experience and growing

independence, as opposed to the safety and security which the Day Centre provides. To an extent, these positive changes have impacted upon the informants' in terms of their sense of purpose, motivation and joy.

Forbes said:

... what's done for them I mean prior to getting this they just look at four walls, they couldn't be bothered and now they are here before I.....overall it's great. Because you see these guys getting on with it and it gives you a great deal... It gives me a purpose as well, I think, yeah. I mean, there are so many of them. One of them may just go and do something completely...and then you go..well, yeah, that is why you are here, really.

And Daracha:

It's nice to see them being valued and working as part of a team. We can help out on some things in their home lives as well. We'll be encouraged to do more...we've had people coming in who then moved on to jobs which is absolutely brilliant to see because they have been out of work or unable to work...and they've moved on. At the end of the day, it is a nice feeling to see that.

At some point, she added:

...it's a fact that...being able to go home at the end of the day and realise in the evening that we made a small difference to somebody. I think that is probably why I am still here. There are so many people in the world to do everything for themselves...they work for themselves, they come home and everything's done for them but you know the world's a lot bigger than that to me and you know if everybody worked together and helped everybody...the world would be a nicer place to be.

Kamden said:

...he's adapted and found ways of doing things and he's done some very good work. And again it has boost his self-esteem and well-being and how he feels about himself. So that's what keeps you going in this line...

Tavion also expressed delight in regard to the work of volunteers, companies and individuals receiving end benefits in the form of refurbished computers. He also expressed joy at the benefits enjoyed by the community at large:

I like the job. And I think it's a worthwhile service that we are providing...From that point of view, the benefits are all there for people...not just community but also individuals and also companies benefit because we take their equipment to be disposed off. And they have got a legal requirement to dispose it properly and in an environmentally friendly way, and we provide that service to them.

Prioritisation of Workforce Interests

Forbes, Daracha and Kamden's approaches to the management of the recycling business is strongly guided by the needs, abilities and enjoyment of the service users. In the designation of tasks and responsibilities emphasis is solely on the individual service users' ability and enjoyment. Attendance at work is also flexible, according to individual needs. Further, Forbes provides the service users the opportunity to attend award dinners for the awards that RB18 has won. These are seen as luxurious functions which they never dreamt of attending, an expression of appreciation and respect on Forbes's part. The result is an increased esteem, pride and meaningfulness for the service users.

Kamden expressed his disappointment and disagreement in some uncontrollable aspects of the business. He disagrees with the expansion of the recycling business because expansion commercialises the business and deprives it of its social purpose. He thus worries that he would not be able to attend to the trainees' needs as effectively.

For Tavion, although the recycling business was not set up to help volunteers, in managing the business, the volunteers' interests were highly regarded. It was important that they benefit from the volunteering i.e. they acquire some knowledge and skills pertaining to hardware and software issues.

Contribution to Society at Large

Tavion emphasised that the recycling business is not merely a recycling operation. Instead, he regards it as a major benefit for society. This includes the provision of jobs for the retired, opportunities for volunteers to learn new skills and contribute to the community, provision of information technology to rural and disadvantaged communities, and providing a solution for businesses with landfill problems.

With Struan, the researcher gathered that his job became meaningful to him when he started to discover interesting facts related to competitive rivalry in the computer industry. He often emphasised the difficulties that have been caused by these companies. Although he believes that '*There is always a way to get round things,*' what seemed to infuriate him most was the way the public have been '*conned*' into getting printers which are cheap but have to purchase cartridges which are unreasonably expensive in order to keep the printer. On a more personal level, he sees himself as a member of the public before his involvement in the job. In his role, he wants to inculcate that awareness to customers:

.... I could very quickly see how big the market is and how, err, how easy it is to have the customers to fall into it and everybody walks to the door you could explain them...

He spent the first half-hour of my meeting with him explaining to me as if I was a customer, and showing me the actual cartridges by Dell, Lexmark and Canon.

5.3.1.3 Desire to Offer Social Service

The majority of entrepreneurs exhibiting a social value orientation have a social work related background. Coupled with the fact that Forbes, Daracha and Kamden have had years of social work experience suggests that they are social value oriented. Another example is Tavion. Prior to RB11, he took up voluntary work with the Scottish Children's Panel System for approximately 15 years because he wanted to do something for the community.

Entrepreneur	Background
Forbes	More than 30 years experience in social work. Involved in residential social work since he was 18. Invited by his friends to work with people with learning difficulties, started off working for old people's gardens and went into recycling as an option to expand the job scope for the people with learning difficulties.
Daracha	Care Assistant with Banff Day Services. Later joined RB19 as a Driver for 3 years and applied for the position of Project Coordinator.
Kamden	Was a joiner carpenter when the Day Centre was looking for a person with good work experience to run their woodwork department, to manage people with learning difficulties. He joined them in that position for 12 years and was seconded to RB8 when the then manager could not manage the trainees. He has been with RB8 for 7 years.
Tavion	He has been involved with voluntary organisations as a means to contribute to community. His main involvement was with Scottish Children Panel System for approximately 15 years, looking at how to help children with difficult childhood.

Table 5.5: Entrepreneurs' Previous Experience

Perhaps more importantly is not that these individuals are not formally engaged in social work, as illustrated in Table 5.5. As well as seeing the worthiness of the recycling business for the people with learning difficulties, Forbes, Daracha and Kamden enjoy their company and working with them. Tavion enjoys assisting the volunteers in the development of their skills and knowledge. Their satisfaction results from the associations with the workforce in their roles to prioritise and benefit the workforce, the jovial work environment that they purposively create and the learning that they experience from them. As Daracha said:

I love it. Absolutely love it...You have stress in other ways...sometimes it can be quite disappointing to them but you come in the next day, and that person is still smiling so...as well as making them feel valued, they also make you feel valued..

From a relatively unique standpoint, Daracha's desire to offer her services was also rooted in her sense of gratitude to the service users. During the

second hour of the interview with her, she revealed the underlying passion and motivation for her continuing in that role:

I myself had mental health problems a few years back and I was able to come back and not feel judged for what happened to me, or how I was feeling. I was given a time, space...And this is from service users that I worked with....to have the friends and the help...I think that's been the main bit for me here.

Daracha feels that she has benefited from working in the recycling business and aspires to at least make a slight difference to the service users, saying:

You know I ... I value their input very much and hopefully that you know...I can give them a little bit back.

5.3.2 Green Value Orientation (GVO)

Green value orientation is a way of understanding the potential/ existing recycling business as an opportunity to do environmental good. It is reflected in the inclination to think, understand, see, be motivated, behave, decide and act so that the opportunity is utilised to contribute to environmental sustainability (see Table 5.1). This outlook and green motive guides the entrepreneur in the exploitation of the opportunity. Amongst the entrepreneurs interviewed, green value orientation was apparent in Garry and Iver. A typology of green value orientation is presented in Table 5.6.

Table 5.6: Typology of Green Value Orientation

Opportunity to do environmental good		
Patterns of GVO	Evidence	Entrepreneur
Deep-rooted desire to protect and enhance environmental standards	<p>Personal aspiration to contribute to environmental sustainability since an early age;</p> <p>Environmental related work experience to uphold that aspiration;</p> <p>Constant emphasis on genuine approach and practice whilst using RB20 as a tool to realise his environmental aspirations</p>	Garry

Table 5.6: Typology of Green Value Orientation (continued)

Opportunity to do environmental good		
Patterns of GVO	Evidence	Entrepreneur
Dislike wastage	Constant reflection on the practice of non-wastage in the business; Constant emphasis on his dislike to see wastage happening in society	Iver

End of Table 5.6

5.3.2.1 Protect and Enhance Environmental Standards

One example of green value orientation is the desire to protect and enhance environmental standards. Garry provides a good example of this. Possessing a strong interest in environmental affairs, he labelled himself a tree hugger in the 1980s. Although his working life began with the air force, his aspirations to contribute to environmental benefits have always been in sight. After leaving the air force, he worked for a conservation charity for a year and pursued a Master's in Environmental Sciences. His original plans were to join the Scottish Environmental Protection Agency. He wanted to increase the low environmental standards (relative to the growth in the UK waste management industry). Further, when he found himself in conflict with many people's 'rose-tinted' idea about environmental improvements, he aspired to get into a position in which he could make them change. He genuinely contemplated that the most effective way to do so was to gather experience in running a waste management facility:

... I can see that a lot of companies weren't really trying hard to do things the best way they could. I thought well why don't I get involved and do my best to try and raise standards of the actual operations. So instead of relying upon somebody from external coming in and telling us what to do, getting outside and do it myself.

Thus, started his career in the waste industry with environmental audit, then environmental management and then later on ventured into operations

issues when RB20 came onto scene. Later, when he became the General Manager of RB20, he took that as a means by which he could begin to use to protect and enhance the environment:

I want to operate to a high standard because that is where my concern ultimately is. You know we have a responsibility for the environment and we should do everything we can to try and protect it and to enhance it so that's where my original motivation was.

His ultimate concern was real environmental benefits and not merely getting around regulations. He showed a steely determination to stick with his motives:

I take the environmental issues very very seriously and I want to do everything that I can to make sure that we as an operation and we as a company don't just take the regulations and try find the ways round them or hmmm to the minimum...You know over time inevitably you get into the company business culture and business ways of doing things and every now and again you just have to step back and say 'hang on what am I here for?'

5.3.2.2 Reduce Wastage

Another example of environmental orientation is found in Iver. However, Iver's emphasis relates to his dislike of wastage:

I hate to see wastage. I hate to see things being wasted, just dumped at the side and this is just what's happening to society...I just like to see everything being recycled, reused. Basically I like to see everything recycled...rather than just dumped in a hole in the ground...

He sees his recycling business as a positive contribution to the reduction of wastage and use of landfill:

We could see something that we could build up: nothing goes to landfill, everything is recycled and reused.

Additionally, the researcher noted that he was constantly checking that there was zero waste generated in the site during the 45 minutes guided tour. It is useful to mention that researcher did not initiate conversations in relation to zero waste practices. Iver repeatedly straggled from current conversation topics when they approached different areas of the site and tended to utter (not interpreted as an attempt to highlight zero waste practices, nor intentionally divert the existing conversation) in mumble-like tones, similar lines which suggested that he wanted to be assured that zero waste was being practiced. Two examples are cited below:

Nothing.....Everything that comes in this yard is recycled. There is nothing wasted..

And later;

No...nothing is wasted here is it? The wood goes to the factory, the nails go to a scrap yard, and the bedding goes to a riding school.

Iver did not deliberately look for an opportunity to venture into the recycling business to feed his desire to reduce waste and contribute to diversification from landfill. His involvement started off following an invitation from his friend, Skene to join partnership and was encouraged by his technical knowledge in wood. Further, he had suggested in some ways that business growth and satisfaction together with the ability to generate some returns kept him in the business. However, his constant emphasis on the criticality of recycling in relation to waste reduction and landfill diversification suggested an overarching manner of viewing the business and his fundamental motive. It came across that the underlying meaning for him is that they are pursuing a business which upholds recycling and reusing practices, and in turn contributes to landfill diversion through waste reduction. Iver spoke about their expansion of the recycling operations:

We actually started just doing pallets, and then when we realised how much wood waste we were generating with scrap pallets...so we got in this shredding machine.

It must be noted that he spoke about the expansion in terms of waste reduction. Profit motives and anticipated profits were not implied in any way. Further, he mentioned that the cost of recycling can be relatively high compared to landfill costs, which draws people away from recycling:

A lot of people are just interested in money. And that is it.... (pause)...it shouldn't be down to money.

He also spoke about his disenchantment with the Council for their lack of support in providing a helpful alternative as regards addressing their problems with premises, an issue which may force them to close the business. The following statement was made at a slow pace and a gradually softer and fading tone:

This is the only wood shredding company in Aberdeen... Once this place closes down there is no more wood shredding company in Aberdeen...

It appears to the researcher that his main concern about the inability to carry on the business is related to his understanding and stance on the business's importance in contributing to wood recycling in the area.

5.3.3 Financial Value Orientation (FVO)

Financial value orientation is a way of understanding the potential or existing recycling business as an opportunity to generate income. It is reflected in the inclination to think, understand, see, be motivated, behave, decide and act so that the opportunity is utilised to make money which may be in the form of increased profits, cost savings, or additional income generation (Table 5.1). In the exploitation of the opportunity, entrepreneurs with a financial value orientation are primarily driven and inspired by financial motives. A financial value orientation is most prevalent in Brody. However Jock, Renaldie, Beiste, Ramsey and Gilmat also exhibit a financial value orientation. Table 5.7 presents a typology of financial value orientations.

Opportunity to generate income		
Patterns of FVO	Evidence	Entrepreneur
Primarily motivated by profits and cost savings	Constant emphasis on massive profit from selling recycled protectors compared to new protectors.	Brody
	Potential decrease in other business activities in the group of companies if recycling operations boost profits. Potential reprocessing of green glass because of recent decrease in price paid by United Glass.	Jock
	Encouraged by financial rewards reaped by others.	Beiste Renaldie
	Consideration to stop the business if financial rewards do not satisfy the hard work.	Beathas
	Recycling of aggregates as a means to save landfill cost for existing construction business.	Gilmat
Strategy to generate extra income	Additional source of income while providing a solution to employers' circumstances.	Ron

Table 5.7: Typology of Financial Value Orientation

The next sub-section elaborates on the different patterns of financial value orientation are elaborated.

5.3.3.1 Profit-Making and Cost Savings

Brody has been supplying protectors for more than 30 years and has owned Lead Piping Marketing International, a manufacturer of new protectors (objects which are used to protect pipes during transportation to oil and gas fields) since 1986. In that position, he has always seen protectors coming back from offshore and moving into landfill. He has always thought that it was a waste of money and energy, despite being an acceptable practice. Thus, he used to have the idea of operating a recycling business. However, the idea was not materialised until when a customer required a large number of protectors within a short delivery time. This request pushed him to have a first trial in recycling protectors because manufacturing new protectors would not have met his customers demand within the required

delivery time. In that first sale of recycled protectors, he found that he could make more profit from recycled protectors compared to new protectors:

...instead of paying £19.50 per set, I only paid £9.50 per set. So that saved a lot of money; it saved a big hole in the ground and it proved to me a point that there was money to be made in recycled protectors.

...We are beating the producers who manufacture them..arr...on the err..protectors..we are beating the manufacturers and in some instances, I get to put in a new price for recycled protectors. So when you can do that, you are making good money.

After that experience, he invested most of his time and capital in the recycling business, as compared to the manufacturing of protectors. Brody constantly reiterates the fact that he made a massive profit which he generates from selling recycled protectors as compared to new protectors. He related every subject that we covered back to profit-making and cost savings.

On one occasion, a fax came through in the middle of his conversation with the researcher. With widened and sparkling eyes, Brody left his sentence midway. He leapt from his seat and almost toppled over the table to reach the fax machine and said: '*One come in, big money*', and immediately showed me the fax, proudly saying there will be approximately £8,000 profit to be generated from there.

It is also true that Brody cares for the environment and takes pride in the environmental contribution he makes by producing recycled protectors. He frequently highlights the need for environmental preservation and emphasises the idea that manufacturers should also consider the environmental impact of using recycled protectors. Although he conveyed his pride in contributing to the environment by diverting the protectors from landfill, he never failed to accompany that with a statement that his job was to make money and frequently emphasised the satisfaction of experiencing

the profit from recycled protectors. It was obvious that the increase in profit-making from recycled protectors relative to new protectors was the fundamental motive for his involvement in the recycling business. He was honest about that-

As my grandchild was saying; 'You know Grandpa you are doing a great thing for the environment'. I said, 'No, no. Grandad's doing a great thing for business. As much as this will work for the environment, Grandad's job is into making money'. So don't think I am riding a white horse here and I am out saying to the world I am doing this. I said, 'Grandad is doing it actually to help the environment but also to make money...'

and;

Put it this way, one shouldn't be saying this but you'll find that on a new product, I am going to make more selling my recycled anyway...

Recycling to him is indeed a money making opportunity:

..So you've quite a bit of money saved in preparing that protector. That's called recycling as far as I am concerned...

And;

There's a waste company that I can get protectors from. They dump to me. I clean them and I can make money from there...

His prime motivation was the thrill of making money out of rubbish:

The main motivation, well, I feel that if I remember for anything, I remember there is a guy who started off recycling. I am quite happy with that. I get the thrill of taking rubbish and selling them for a damn good price...

Jock who runs a haulage and vehicle servicing business has been securing contracts with Moray and Highland Councils in the collection and transfer of glass, paper and cardboards. Jock realised that the recycling side is an

important and growing part of the business and takes up approximately 20% of the haulage activities. Further, the recent decrease in the price of green glass paid to them by United Glass, and potential savings in transportation costs has spurred him unto researching the potential to include glass reprocessing in his business. For Jock, the bottom line is profit and like Brody, recycling to him is a money making opportunity:

If the glass and the recycling side will start increasing, I would be quite happy to decrease another but increase the recycling. If I end up with 21 vehicles all in recycling I'll be quite happy...the quarry work – the cost and the profit...there is nay a lot of profit in quarry work...because vehicles get destroyed, recycling is the only way to go in the future, never going to go away...it's all over the world and central government today...

Renaldie operates an international franchise specialising in inkjet and toner cartridge refilling. An Argentinean, he left the country three years ago due to the economic downturn and started the franchise with his wife in Aberdeen. Back in Argentina, Renaldie used to work with a bank for twenty-four years. During the economic downturn, he observed that the bank was using a lot of refilled cartridges. He also observed that the use of refilled cartridges was a generally popular practice and saw it as a good way to make money.

Beiste's recycling business is similar to Renaldie's but he operates under a different franchise. Beiste left his employment as relationship manager which involved a lot of travelling and wanted to do something different. In running the franchise, Beiste saw that the difference in price i.e. offering customers a much lower price as compared to new cartridges created an opportunity to make money. Additionally, a core influence which led Beiste to consider this option was observing his brother who was running a similar franchise for almost two years and was doing really well.

It might also be worth mentioning that Beiste possesses more than one value orientation. Apart from being financial value orientated, he is also social and entrepreneurial value orientated. Hence, although Beiste,

Renaldie and Struan operate similar franchises, they have different patterns of value orientation. Struan's main concern is to explain to people about the real situation and how their money can be saved (see Section 5.3.3.1). Renaldie's main concern is to make money. On the other hand, Beiste has a hybrid of value orientations (see Section 5.4).

5.3.3.2 Additional Source of Income

For Ramsey, the Japanese trading company he was employed with was facing insufficient capacity to ship protectors from their customer in Norway back to Japan where they were originally manufactured to be cleaned. Thus, he and his colleague thought that it was an opportunity to make some additional income if they would set up a company in Aberdeen to do the refurbishment.

5.3.4 Entrepreneurial Value Orientation (EVO)

Entrepreneurial value orientation is a way of understanding the potential or existing recycling business as an opportunity to entrepreneur (see Table 5.1). Whilst entrepreneurs exhibiting different categories of value orientation undoubtedly conveyed a degree of entrepreneurial traits and characteristics as well as an innovative nature, these are relatively strong amongst the entrepreneurial value orientated entrepreneurs. To illustrate this point, three obvious examples follow.

Farlane's self-employment began with manufacturing chemical products for the efficient cleaning of refrigeration units and tanks. This was replicated and resulted in market saturation. Farlane thus made a distinction between being entrepreneurial and being a 'copyist' (as he labelled it) and is a good illustration of a relatively strong innovative character:

We...we...I resent people...I mean as a sideline, I mean I opened up the first video shop, hiring videos in Fraserburgh in 1980. Within 3 years there were 10 shops. People cannot help themselves. They've got to copy. That's not being entrepreneurial. That is just being a copyist...So what we've done is – to end up this way is...it will be very difficult for people to copy what we do because for the first time in years, we used a technical ability and a

technical knowledge to get this to where we want to be. That's why we went up like this.

Farlane has made an interesting point which illustrates the first mover, Schumpeterian imitation, unique selling points and barriers to entry. These are the key aspects of entrepreneurship which do not place emphasis on financial revenues.

Gilmore, whom the researcher was recommended to interview at the start of the study by BEP-NE and subsequently by earlier informants as being truly entrepreneurial in his recycling business said:

...who knows what the future holds but... emmm...I suppose I suppose the challenge is the challenge is well, although sometimes even if things are going bad, you are really busy or you are really stressed or ...you still kind of strive on it...you know what I mean? You get a kind of buzz off for that...excitement ... (laughing)

Sutherland gave the researcher one of the most interesting encounters during her field work. She asked 'How do you manage your business, Sutherland?' In the next five minutes that followed, she struggled to keep up with the informant's pace (thank goodness for Dictaphones!); no space nor chance to utter any words nor thoughts in between. Sutherland reacted with continuous high pitches with barely any pauses. He blurted with energy and enthusiasm while moving from one subject to another without being prompted. The point of interest in this scene was the implications of his attitude, approach and drive which suggested a clear entrepreneurial passion and motivation. For example:

...You make wrong decisions all the time. You make wrong decisions every week. Big ones sometimes. I mean everybody makes wrong decisions. Everybody makes mistakes but at the end of the day you do not dwell in them. You must move onI never worry about competition. Because competition's healthy. A level of competition is always healthy. Because you get complacent. With no competition you get lazy... usually it keeps you up

in the morning, gets you fighting...OK some days it doesn't work like that but guarantee it goes back that way. The next day, you push on...You got to go. You compete. You've got to get up with a purpose. You must get up for a purpose. So right, you are going to do this. If you've done something that day, it's better than yesterday or even the day before you are a winner. Because nobody can knock you for trying...when you get there, what do you want to do then?...you just keep adding to it.

More examples of an overarching entrepreneurial orientation, particularly the need for achievement, are depicted in Table 5.8.

Entrepreneur	Quote
Phyfe	<i>The targets that we set for the improvement of the business are never financial... it's volume...It's me that is pushing me. I can't help it. I got to. I've got to push the thing as far as I can, as hard as I can all the time. And it's just something inside of you that makes you push you know. I've got to keep pushing all the time to achieve as much as can be achieved.</i>
Sima	<i>I've got the determination to see that I can make a go of it myself and I am doing alternative health care and things like that as well...so I am doing lots of different things to see if what make me tick.money hadn't made me, hadn't given me everything, what I've wanted. I have always wanted to be part of something that was successful. I suppose I enjoy the challenge of pushing and doing different things...</i>
Bean	<i>I think to be honest, the challenge...emm...I always wanted to work for myself...always looking for opportunities you know...</i>
Carlton	<i>What we are actually doing is providing a service from what you call the cradle to the grave...no one else does this here...</i>

Table 5.8: Overarching Need for Achievement

Opportunity to entrepreneur may take different patterns and an individual entrepreneur may portray more than one pattern. Further, the evidence found in one particular form is most likely to vary between the entrepreneurs. It may be an opportunity to be one's own boss, to extend a

family tradition, provide an alternative to diversify an existing business, or simply to be innovative.

Table 5.9 shows a summary of the different patterns of entrepreneurial value orientation.

Opportunity to Entreprende		
Patterns of EVO	Evidence	Entrepreneur
To be one's own boss	Fulfil aspirations to venture into/ sustain self-employment status: - personality and character.	Bean Gilmore Phyfe Sutherland Skene
	Personal motive to have a business running for the son.	Bean Carlton Gilmore
Family influence	Support by family members during start-up and continuing operations.	Gilmore Phyfe Sutherland
Consideration of alternatives to diversify existing business	Related to existing business issues.	Carlton Henderson Jamie Kyrk
Emphasis on innovation	Desire and pride associated with starting up and growing something different.	Carlton Farlane Jamie

Table 5.9: Typology of Entrepreneurial Value Orientation

5.3.4.1 To Be One's Own Boss

Bean, Gilmore, Phyfe and Sutherland acknowledged that their individual personality/ character suggested that they want to be their own boss rather than being employed. They have been drawn to the idea of running their own business, and never (or barely) enjoyed employment.

For Gilmore, his winter oriented business was not generating a stable income during other seasons. The recycling business became a way of sustaining that status. He confessed:

I've always kind of wanted to to errr to run my own business emmm....I don't know...I just...I didn't ...I had 1 or 2 jobs before that working for people and I didn't really like it much (laughter)...

...and I thought well...I can...you know, I'd like to be my own boss...It's not like emm say if you are working for somebody...it's quite nice watching something grow...you know you are actually kind of creating something and you are creating it for you, you know. It's not like emm say if you are working for somebody, you know you are making them wealthy out of your back if you know what I mean.....and somebody not telling me what to do all the time (laughing)...

Sutherland's critical judgments and sarcasm about his employer before he ventured into the recycling business illustrates a similar orientation:

I was there for for about 2 ½ years but I knew it wouldn't last. These people are a nag...they have short term facts to a long-term problem. That's how I see these people. However, the job finished. I knew it.

And later;

I don't need any help. I don't like help. Something goes wrong, it's in my head. I listen to people but I make up my own mind. I just got instinct. When somebody tells me something, I'll say what's for me and what's nay for me. It's as simple as that.

Phyfe's comments about his accountancy position with an American drilling company tell a similar story:

... it was one of these jobs where it is really easy errr it was good fun to work with. It was that good that nobody else wanted to move so there was no chance of promotion or it was going no where...

It may be interesting to note that the desire to be one's own boss may not necessarily be only related to the informants' attitude, personality or

character. For example, Skene had a desire to be his own boss in partnership with his brother-in-law following employment problems related to his being arthritic.

From another standpoint, the informants' entrepreneurial value orientation can also be revealed by their personal motives to keep the business going for their sons. To put it differently, it seems that they aspire for the entrepreneurial tradition to be carried on to the next generation.

Gilmore:

Hopefully well, I am hoping that I will be able to build up and keep building something up but errr when I want to retire, I would either have something to pass down to my son.

Henderson:

...then one of my sons wants to take it over. So I can't stop. I got to keep it on...

Carlton:

Swallow Salvage Limited was, errr, formed approximately 10 years ago. My son who is 28, coming up to 29, was desperate to get into this side of the business..... his idea...dad's money.

Having said that, the informants' entrepreneurial value orientation themselves may have in fact been influenced by their parents. We look further into this in the next part.

5.3.4.2 Family Influence

In some instances, family members play a significant role (Aldrich and Cliff, 2003) in the entrepreneur's decision to venture into the recycling business, or in the course of running the business. This may be support given to the recycling entrepreneur during start-up and running of the business (Sutherland, Gilmore, Phylfe). Although lacking in formal education, Sutherland and Gilmore were guided by their parents in running the

business and thus opened a new route for entrepreneurship for them. Sutherland commented about his parents:

My father and mother...They were good to me. They were good. They were not people that had nay business sense. They had business sense. My mother especially. She has very very very very errrrr very good foresight...

For Gilmore's father, it was an aspiration to see his unfulfilled self-employment dreams lived by his son. In line with that, Gilmore received practical, moral and financial support from him:

I've quite a lot of encouragement from my dad as well. I think he always wanted to run his own business, emmm, but until that time, had never managed it. So he was quite keen for me to do it. So he gave us some money to start up. Emmm, that's how I really got started so I think if not been for him, you know...for his backing, I might not have done it.

Phyfe who studied microbiology and accountancy at university comes from a long line of scrap merchants. Phyfe's grandfather started his own coal business in 1927 in Elgin. In Phyfe's words: *'he just got up one morning and decided to be a scrap merchant.'* Later, Phyfe's father worked for him and was also sent to other merchants to learn more about different aspects of the business. Phyfe has been working in the yard with his brother since he was 7 years old, which he jokingly termed as *'child labour'*. The business started growing over time as new generations of the family arrived and took interested. In 1979, his brother and 2 cousins joined. Then in 1988, the family bought a reasonable sized skip hire business in Fraserburgh and he was phoned up:

We bought this place in Fraserburgh, you better go and run it. So that was me.

From another perspective, family influence may be by way of setting an example of success in the business instead of the direct forms of support mentioned above. Beiste's brother's success in a similar franchise led him to

explore that alternative within his personal circumstances and he found it to be worth while.

5.3.4.3 Business Diversification

Kyrk, Jamie, and Henderson were running other businesses before they ventured into the recycling business. It can be said that it was in the course of considering alternatives to diversify their existing business that the recycling opportunity was recognised. In general, this consideration was related to an existing business issue, although the forms that issues took vary amongst them. The businesses of both Kyrk and Jamie may be deemed to be going through a '*bad spell*' (as Kyrk put it). Henderson and Farlane's start-up of their recycling venture was strongly influenced by their business networks. Henderson was not in a position to reject his main customer's demand to recycle wood. Farlane claimed that it started '*by accident more than anything else*' because they were approached by Lever, a producer of soap powder who was facing problems with their end material which could not be processed under Lever's brand due to its inferior quality. Lever had approached him to take in these end materials, reprocess them and sell them under his own brand.

For Carlton, he started the recycling business scrapping end-of-life vehicles for his son. The business was later on diversified into a massive tyre recycling operation because of legislative provisions that tyres are no longer allowed to be land filled.

5.3.4.4 Innovation and Creativity

When Farlane started his recycling venture, he was bringing in waste materials from manufacturers of soap powder which they did not find worth reprocessing. Farlane therefore reprocesses these end materials to get a finished product of soap powder which is of lower specification than brand leaders and re-brands the product under his own trademark. The favourable returns from reprocessing these end materials encouraged him to look further into recycling. Society's rising energy issues coupled with his knowledge in chemistry and experience as a textile chemist brought him to investigate energy savings, using recycling. He researched the internet,

academic papers, books and pamphlets on various ways in which cooking oil may be converted into bio-fuels. Farlane discovered a synergy between the production of soap powder and bio-diesel. In technical terms, a reaction between the fatty acids from cooking oil produced a mixture of triglyceride and soap which is then bleached with hydrogen peroxide to fade the colour from charring. Whilst this is done, sodium carbonate is sprayed so that the resultant par blocks are melted to produce a white powder. This white powder is later blended into soap powder, as a by-product. The soap powder is a recycled product made 100% from recycled material (recycling the end materials) and the energy used to produce the soap powder is made 100% from recycled materials. It is only the packaging that is not recycled. Thus, the strategy is to have a company which produces soap powder, does blending for offshore companies to produce bio-fuel; and uses the bio-fuel to fuel the plant or sell to end-users. Farlane emphasised the innovative nature of his project:

What we do is pretty unique... a complete structure which is taking raw material to produce energy and using that energy to recycle more materials...There is bio diesels all over but they are mainly making it to sell bio diesel. We made it as a source of energy for our process...emm...we don't just produce bio fuel. We produce it and we use it ourselves to recycle something. It's all interconnected.

Farlane had not yet started selling the bio fuel but had experimented with its use in his upcoming plant. He ran the forklift and compressor using electricity generated from bio diesel. Farlane is undoubtedly proud of his bio diesel:

I come out in the morning and start my car, and the first thing I smell is a barbeque; it's my exhaust...it smells like its BBQ and it gives you a good feeling. My son made this fuel, you know.

Although Carlton did not purposely use the recycling opportunity to innovate, the circumstances of his initial recycling business of scrapping end-of-life vehicles was later diversified into a tyre recycling operation and

developed into a massive tyre recycling operation; the purpose of which was to solve the problem of disposing of tyres from the end-of-life vehicles following their ban from landfill. The tyre recycling operation consequently became his primary business overall, not just his primary recycling business. The original tyre recycling operations were mainly segregating and grading the tyres collected from all over the country. The poor quality ones are then shredded and chipped, and used for horse arenas; while the good quality ones are to be exported to other countries for reuse. Later, the uses of the tyre chipped tyres were developed. First, a substitute for oil, reckoned to be more environmentally friendly than fossil fuel was developed. Additionally, and perhaps emanating from his civil engineering background and his interest in civil engineering, Carlton worked to improve the chip so that it could be used on landfill engineering. He has been collaborating with a professor in America, Scottish Agricultural College and Fife Council to make use of recycled tyres in innovative ways by developing the use of chipped tyres. Consequently, he expressed pride and satisfaction that his tyre recycling business is one of a kind in Scotland, providing a service from the 'cradle to the grave'.

Jamie spoke about his different businesses. However, he stressed his liking for the recycling business due to the variety it offers:

I like it because it is different everyday. You know always finding something new to errr to either buy or sell new....recycling is so, errr, varied. There is like, errrr, like something different is going to happen everyday and if I get a new product you know I've got to find out....it is interesting and paper mills and, err, any manufacturing industry is great to go and watch. It's fascinating, absolutely fantastic and I can spend all my days in the paper mill or in a plastic manufacturer.

5.4 Hybrids: Complicating the Typology

Beiste is an exception to all the other informants in that he possesses more than one value orientation. For Beiste, he perceives and sees the recycling business as an opportunity to entreprende, make money as well as provide

a social service. This has been the orientation since the pre-start up phase of his franchise.

As mentioned in Section 5.3.4.2, Beiste was influenced by his brother's success in a similar franchise. This coupled with his desire for a change and to do something different from his managerial appointments led him to investigate his options with Thumbs-Up-Cartridge:

So there is a motivation of something that was successful and doing it somewhat differently from the way that normal people are operating. So that was why....

He also acknowledged his recognition of an opportunity to make money with the franchise-

...and this one in particular, there was an opportunity to make money here.

Apart from the above, Beiste was also keen on the fact that he could offer a very personal service to customers by running the franchise. Although this may not be his main and only motivation for his decision to exploit the opportunity, it was one of the ways in which he looked at the opportunity and he practiced that personal service in the day-to-day running of his business:

I was also keen on the fact that we could operate this on very much a customer focus basis. Instead of the impersonal service that you tend to get in most operations, we can offer very much a personal service to our customers.

It may be useful to emphasise that Beiste is the only exception within the sample of entrepreneurs pertaining to the mix of value orientations. At an earlier stage of data analysis, the researcher had considered Brody and Phye as possessing both financial and green value orientations; and entrepreneurial and green value orientations respectively. However, a deeper investigation into the data showed that greening was merely a

secondary goal; it was not their green values which shaped the construction of their opportunity perception.

5.5 Change Over Time in Value Orientation

Thus far, it has been shown that all the entrepreneurs except Beiste have been driven to their entrepreneurial engagement in the recycling business by a particular value orientation. Data suggests that the majority of the entrepreneurs under the study do not indicate a change of their initial value orientation over time. These entrepreneurs are Beathas, Brody, Struan, Renaldie, Sutherland, Kamden, Phyfe, Jamie, Forbes, Tavion, Jock, Garry and Henderson. However, it has been noted that environmental awareness and the significance of recycling for these entrepreneurs has increased. Furthermore, some of them have inculcated additional environmental goals in the day-to-day running of their recycling businesses (Struan, Renaldie, Beiste and Ramsey). Nonetheless, this does not shape the construction of their opportunity perception. They do not view the recycling opportunity as an opportunity to do environmental good.

From another standpoint, whilst the initial value orientation may appear constant, its strength and intensity may have weakened. This seems to be the case with Iver who was very de-motivated by external circumstances which were beyond his control. It is not that Iver no longer holds to his aspiration to reduce wastage. However, the effects of de-motivation may have impacted negatively on that drive.

On a more interesting note, data also suggest that the initial value orientation does not necessarily remain constant throughout the entrepreneurial process. Additional values may be inculcated and these values underlie the way in which the opportunity is constructed. Thus, the entrepreneur may inculcate an additional value orientation, the norm being an additional green value orientation (Table 5.10).

Entrepreneur	Value Orientation	
	Initial Phase	Continuing Phase
Daracha	Social	Additional: Green
Kyrk Sima Gilmore Farlane Carlton	Entrepreneurial	
Skene	Entrepreneurial	Additional: Social
Bean	Entrepreneurial	Additional: Financial
Ramsey	Financial	Additional: Entrepreneurial

Table 5.10: Change in Value Orientation over Time

It may be asserted that the value orientation at the continuing phase is an additional value orientation. The initial value orientation remains and in most cases, the entrepreneurs' inclination remains with the initial value orientation. Ramsey is the only exception in this instance. He was more inclined towards his additional entrepreneurial value orientation relative to the initial financial value orientation at the continuing phase of his entrepreneurial experience in the recycling business.

5.6 Summary and Conclusion

This Chapter has conducted the entrepreneur-level analysis of the research and addressed the research question, 'what is the nature of the recycling entrepreneur's motivation, behaviour, decision and action?' It has elaborated a typology of recycling entrepreneurs based on opportunity construction. This has been segmented according to four categories of value orientation; the meaning of value orientation being a way of seeing and understanding the recycling opportunity which is attached to a particular value. It is highlighted that these categories reflect the **different ways** in which opportunities are constructed, not the process of opportunity construction *per se*. The identification of the patterns of inclination provides

a useful guide for this purpose. The derivation of the typology is not aimed at improving models of existing strands of entrepreneurship. Instead, the researcher has de-constructed the existing models in the different strands in entrepreneurship research, and has grounded the conceptualisation of the nature of the agent in the data collected. This means treating entrepreneurship in the recycling industry as an individual strand, distinct but nevertheless overlaps with the existing strands.

The entrepreneur's value orientation stands at the core of the entrepreneurs' motivation, behaviour, decisions and actions; and cannot be categorised according to the cultural setting of the different sectors or types of businesses. This has been demonstrated by the mix of value orientations within the same sector and the same business. Furthermore, there may be more than one value orientation present in a specific entrepreneur during the entrepreneurial process. Another interesting finding which emanated from the segmentation of the entrepreneurs according to social, green, financial and entrepreneurial value orientations is the paradox that only two out of the twenty-five entrepreneurs in the study possess green value orientation although they are all operating in the recycling industry which is imbued with green values (Chapter 4). In brief, this Chapter has provided a rigorous description of the different ways of understanding and perceiving the recycling opportunity. Chapter 6 will explore how these opportunities came to be recognised and how the paradox took its course during the entrepreneurial journey.

CHAPTER 6

GREENING THE ENTREPRENEURIAL PROCESS OR ENTREPRENEURIALY PROCESSING THE GREEN?

6.1 Introduction

This study is an attempt to understand entrepreneurship in the recycling industry. In an endeavour to incorporate different levels of analysis (Low and Macmillan, 1988) in the study of entrepreneurship, Chapter 4 has conducted a context-level analysis and explores the nature of the structure and provided insights into the nature of the recycling industry. An account of the environmental context, the interplay between social, political and economic strands and the production of a green culture and structure conducive for entrepreneurial opportunities was also provided. In an analysis at the level of the entrepreneur, Chapter 5 was concerned with the nature of the agent. It focused on the value attached to the entrepreneur's perception of the recycling opportunity and presented a typology of recycling entrepreneurs to describe the different ways in which the recycling opportunity is constructed by individual entrepreneurs.

This Chapter continues with a process-level analysis to understand how values are recognised and enacted during the entrepreneurial process. In doing so, it explores the nature of agency. The Chapter takes the stance that the entrepreneur and entrepreneurial process are aspects of the same phenomenon which cannot be separated from the context in which it operates (Chell, 2000). Furthermore, structural determinism needs to be balanced with agent determinism and agency cannot exist or be analysed separately from its structure (Giddens, 1984). Analysis at this level therefore draws upon the interactive processes between the levels presented in the two preceding Chapters in order to understand the dynamic relationship between structure and agency during the entrepreneurial process. The analysis is guided by a sub-question 'how are values recognised and enacted during interactive processes?'

Before proceeding further, it is useful to clarify the meaning attributed to the terms structure, agent and agency within the context of this study.

Structure refers to the green structure which emanated from the socio (political) economic conditions bearing with it, the contextual opportunities. Agent refers to the recycling entrepreneur who undertook the entrepreneurial actions following his or her perception of the recycling opportunity. Agency refers to entrepreneurial agency and is the relationship between structure and agent. The analysis is carried out in a three stage step-by-step progressive analysis that is focused on the interactive processes between the entrepreneur and context. This is followed by a discussion of the value output at the fourth stage.

The first stage of the interactive process focuses on the foundations of entrepreneurial agency where the researcher explores how a particular value orientation (Chapter 5) happens to be constructed. It is shown that the relationship which is evidenced by the entrepreneurs' position in the context enables the individual-opportunity interchange (Chell, 2009) to take place. These positions spelt out the entrepreneurs' past and present relationships with the structure and provided the necessary ties which enabled accessibility to the financial and social resources required in order to exploit the opportunity available. Perhaps of greater significance as regards the context of this study, is the role the position(s) played in the construction of the configurative elements underlying the entrepreneurs' value orientation via the interactive processes between the entrepreneurs' cognitions and affect²⁰ with their social context.

The presentation of this analysis follows the chronological flow of the initial episode of the entrepreneurial process from pre-start to consequences. Accordingly, the 'present' position at this stage of the analysis refers to the entrepreneurs' position in the context at that pre-start point in time. The position exists in the enacted context or enacted environment as Johannisson (1987) termed it and as the analysis at later stages will show, it changes in accordance with the outcomes of enactment. To avoid the blurring of circumstances between different episodes of enactment and to account for the temporal changes that occurred during the entrepreneurial

²⁰ It may be helpful to mention that the word 'affect' used within the context of this study refers to an inward disposition.

process, positions which reflect a subsequent episode of enactment are excluded at this stage.

The second stage proceeds to analyse how opportunities are constructed following three essential aspects which are strongly impacted by the entrepreneurs' value orientation. Firstly, the confluence of the entrepreneur's specific value (Chapter 5) and green values embedded in society (Chapter 4) is considered. Secondly, the recognition which encompasses the entrepreneurs' belief and awareness of their abilities to pursue the opportunity based on their personal circumstances as well as their knowledge and understanding of the structural conditions (Chell, 2008; Chell, 2009) is examined. Finally, their interpretation of the meaning of the structural conditions which were conducive for the recycling opportunity is analysed.

The third stage proceeds to analyse the enactment stage i.e. the entrepreneurial agency in action. It captures the enactment of the meaning they interpreted (Anderson, 2000a) via the formation of the business and which continued throughout the entrepreneurial event. Perhaps, the main interest in this stage of analysis lies in the curious finding that the majority of the entrepreneurs' individual values do not match the green values embedded in society. This raises the question of how the entrepreneurial process takes place. In all cases, enactment gave rise to new experiences and interpretations as well as to corresponding responses. The researcher also explored how entrepreneurs adapted to the green order whilst keeping their individual value orientations and business objectives in mind and adding value to the structure. Processes of harmonisation, utilisation and motivation are highlighted as significant processes during enactment. Thus, enactment in the context of this Chapter is also the entrepreneurs' embedding as part of the structure and maintaining the link with structure (Jack and Anderson, 2002).

Finally, the fourth stage focuses on the consequences of enactment as it relates to value outputs. It is acknowledged that there are a range of elements and scopes pertaining to the outcomes of enactment. However,

the focus on value output justifies coherence with the preceding analysis which explored the nature of entrepreneurship in the recycling industry as emerging from the entrepreneurs' orientation towards a particular value perception of the recycling opportunity. Additionally, entrepreneurship is a concept popularly linked to the extraction as well as the creation of values (Anderson, 1998; 2000, 2000a; Bruyat and Julien, 2001; Davidsson and Wiklund, 2001). The enhancement of the entrepreneur's specific value and an overarching green value are the highlights of the analysis. It is also highlighted that the overarching green values created resulted in a consolidated green structure, which appears paradoxical with the entrepreneurs' value orientations which remained the pre-dominant motivation during the entrepreneurial process. Furthermore, the consequences of enactment may be seen as the cumulative effects of the earlier mentioned three stages of the interactive process. The process is dynamic, complex and a circular relationship between structure and agency. As mentioned earlier, it is only for analytical purposes that the chronological flow is assumed.

This Chapter presents the above mentioned four stages of the entrepreneurs' relationship with the context progressively. Section 6.2 presents the analysis on the nature of the agency relationship. Section 6.3 concerns the processes of opportunity construction. Section 6.4 continues with the exploration of the relationship between the entrepreneur and the green structure in the enactment stage and Section 6.5, the post-enactment stage i.e. the outcomes of enactment. Section 6.6 summarises and concludes the Chapter with a model of entrepreneurial process in the recycling industry.

6.2 The Foundations of Entrepreneurial Agency

This Section establishes the foundations of entrepreneurial agency i.e. the relationship between the entrepreneur (agent) and the context (structure) linked by the recycling opportunity (Figure 6.1). It demonstrates that the entrepreneurial process was made possible following the entrepreneurs' accessibility to the recycling opportunity because of his or her position in the context which provided the necessary ties (Larson and Starr, 1993;

Johannisson, 1996) to enact the environment (Anderson *et al.*, 2007). This formed a basis for the entrepreneur-opportunity interchange (Chell, 2008).

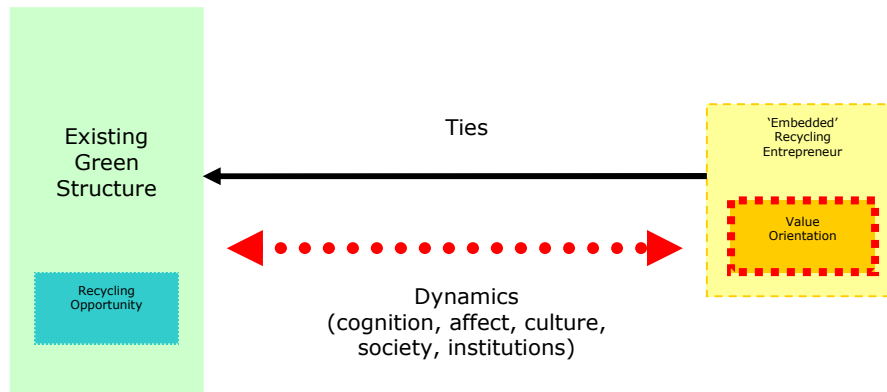


Figure 6.1: Entrepreneurial Agency (Source: Author)

Furthermore, the Section also demonstrates that the entrepreneurs' position in the context plays a part in the interactive processes between the entrepreneurs' cognitive representations and affective states (Chell, 2008; Chell, 2009); and with the culture, society and institutions in which they are reproduced (Fletcher, 2006). Consequently, it plays a role in constructing the entrepreneurs' aspirations, ambitions and values which configure their individual value orientation. Table 6.1 summarises this point. It demonstrates how the entrepreneurs' value orientation happened to be in a particular way following the individual entrepreneur's cognitive and affective interactions with their social context. This is followed by some selected illustrations to articulate the phenomenon.

Table 6.1: Value Orientation: Cognitive, Affective, Relational and Structural Embeddedness

Entrepreneur	Position in Context	Opportunity Accessibility	Values, aspirations and ambitions as configurative elements	Value Orientation
Daracha	A Carer for the Social Work Department of Aberdeenshire Council turned Driver and later Project Coordinator for RB19 in 1998.	Employment ties	Admitted that she left Aberdeen City because she was bored with every job she had; with the longest lasting for approximately a year. Fed-up, she chanced upon the Relief Care Assistant job as the position advertised was for a Bus Escort. However, as regards the new the new line of career, she says <i>'that was me, it's 8 years now and I've no intention of leaving.'</i>	Social
Forbes	A social worker since he was 18, working with kids and then working with people with learning difficulties in old folks' gardens; Project Coordinator of RB18, since 1989 when it started.	Employment ties and colleagues with similar interest	His career has always only centred on social work as he does not look outside that context. Determined to stay in the field despite the fact that he was pounced on and injured by younger lads and stay off-work for 6. His response to the experience was simply to engage in social work with a different age group.	Social
Kamden	A self-employed joiner who later joined the Wood Work Department of Aberdeenshire Council as a Day Centre Officer working with people with learning difficulties for 12 years. He was later on transferred by Aberdeenshire Council to RB8 (collaboration between the Social Work Department and a social organisation) as General Manager and has been in that position since 1997.	Employment ties	In his job as Day Centre Officer in the Wood Work Department, he gathered that he fitted what was required to understand the needs of people with learning difficulties.	Social

Table 6.1: Value Orientation: Cognitive, Affective, Relational and Structural Embeddedness (Continued)

Entrepreneur	Position in Context	Opportunity Accessibility	Values, aspirations and ambitions as configurative elements	Value Orientation
Struan	Association with customers created a sense of social commitment with as regards the job; General Manager for Cartridge World.	Employment ties	He felt that he had a social duty to fulfil upon learning about how big companies led the public to assume that their cartridges are genuinely branded when they are not and been "conning them" into getting printers which are cheap but ending up with a high running cost for cartridges. Additionally, original cartridges were mainly half filled.	Social
Tavion	Social and voluntary work background. Project Manager for RB11.	Employment ties. Grant from Landfill Tax Credit Scheme. Local Enterprise Funding Programme.	He has always wanted to do something for the community in some way and has engaged himself in voluntary organisations for 15 years.	Social
Garry	Education in environmental management; Work experience in environmental agency; Work experience as Manager of a multinational IWMC.	Employment ties	He was commonly perceived as an environmentalist in his young days and was given the name 'tree hugger'. Apart from the days when he joined the Air Force, his entire career has been centred on environmental issues. After his term with the Air Force, he pursued a Master's Degree in Environmental Management in order to advance his career in that direction.	Green
Iver	Work at the offshore industry provided him with knowledge in wood matters; Friendship with Skene who was looking for a partner who is knowledgeable in wood matters.	Friendship; Partnership finance.	He thinks that the present society tends to take things for granted and appears to be taking things for granted; and that too many things are simply wasted. He simply hates to see things wasted.	Green

Table 6.1: Value Orientation: Cognitive, Affective, Relational and Structural Embeddedness (Continued)

Entrepreneur	Position in Context	Opportunity Accessibility	Values, aspirations and ambitions as configurative elements	Value Orientation
Beathas	Husband started a recycling business.	Husband's business ties from previous employment provided supply. Personal and bank finance was possible, although a burden.	Employed as a Nurse, with her husband made redundant and a growing family, money was a big issue.	Financial
Brody	Manufacturer of virgin protectors for the past 11 years. Frequent observations of used protectors from offshore, dumped into landfill, seen as a waste of money and energy.	Existing business networks; Holding company as financial capital provider.	He wanted to ensure his financial independence after being made redundant so that he would still be able to spend luxuriously for his family. For example, for his daughters' graduation and wedding ceremonies.	Financial
Gilmat	Already running a construction business and diversified into recycling on a minor scale.	Recycling business is to recycle construction wastes into aggregates and his main source of supply is his construction business.	He excelled in school and was offered to study Law at Cambridge. However he declined this offer because his ambition has always been to run his own business. To him, the challenges involved in doing that is the biggest challenge and he has always been determined to excel in that. His motto in running his businesses has always been: <i>'Life is short. You need to be able to leap quickly.'</i>	Financial
Jock	Family background of entrepreneurs. Took over an existing haulage and vehicle servicing business from father and uncle.	Networks with Moray Council whilst servicing their vehicles in his vehicle servicing business. Finance from existing haulage business.	He was offered a place to study engineering at University but declined the offer. With an 'entrepreneurial upbringing' he holds the view that practice is more important and that one does not need to have a degree to be an engineer and manage the vehicle servicing business his father and uncle ran. He believed that joining the business as a mechanic at the beginning would enable him to reach his entrepreneurial goals quicker.	Financial

Table 6.1: Value Orientation: Cognitive, Affective, Relational and Structural Embeddedness (Continued)

Entrepreneur	Position in Context	Opportunity Accessibility	Values, aspirations and ambitions as configurative elements	Value Orientation
Ramsey	Consultant for a manufacturer of virgin protectors who was facing cost issues involved in refurbishing used protectors.	Employment ties; Colleague; Personal finance between both partners was possible.	He had a growing family and was keen to increase the quality of the treats he could offer to the family. In speaking about the employer's problem with lead protectors, he appeared to have an outlook which suggested: 'this is a do-able task and it will give me the money'.	Financial
Renaldie	Previous employers' massive use of recycled cartridges. Wife has an advantageous position in the locality because of associations with various business networks.	Franchise support; Bank loan.	The popular practice of recycling cartridges by many organizations back in Argentina and the observation of financial returns by cartridge recyclers was implanted firmly in his mind.	Financial
Bean	Employee of the recycling business which he became a member of its BOD and eventually bought over the company.	Existing networks of the business. Personal and bank finance.	He left school at the age of 14, started working for a scrap metal merchant at 17 and was very much taken into the metal industry. He had always wanted to work for himself and his interest in metal industry led him to continue his self-employment dreams in that area. He felt his employment with previous scrap merchant and subsequently Big Business taught him many valuable lessons in managing his own business.	Entrepreneurial
Carlton	A range of different businesses. Recycling of ELVs business faced problems in discarding tyres. Son's extreme interest to venture into tyre recycling.	Networks from his wide range of self-employed businesses, and his position as Chairman of the Local Council. Finance from existing businesses.	He left school at a very young age, comes from a farming background and continued formal part-time education on civil engineering whilst working. He later on started plant hire, landfill and quarrying business with his brother, who went on very early retirement. Carlton carried	Entrepreneurial

Table 6.1: Value Orientation: Cognitive, Affective, Relational and Structural Embeddedness (Continued)

Entrepreneur	Position in Context	Opportunity Accessibility	Values, aspirations and ambitions as configurative elements	Value Orientation
Carlton (continued)	Assumes the position of Chairman of the Local Council.	Landfill engineering knowledge and background.	on the business for 30 years before an offer to purchase which he could not refuse came by. He speaks with pride and passion about all his businesses and expressed a low spirit associated with the selling of the landfill and quarrying business despite the justification for a good price.	Entrepreneurial
Farlane	Set up different types of businesses prior to this but was not happy due to replication by others. Existing soap powder recycling operations.	Networks developed throughout during his employment in the textile industry, and later his wide range of self-employed businesses. Discussions with Aberdeenshire Council. Personal finance.	He was engaged in various types of self-employment activities and held a strong opinion that there must be more integrity amongst entrepreneurs in general to exhibit their individual creativity rather than simply replicating each others' activities.	Entrepreneurial
Gilmore	Set up different types of businesses prior to this. Father strongly encouraged him to be an entrepreneur.	Father's guidance on business issues. Developed networks with potential customers (e.g. RB8 and RB20). Personal, family, previous business and bank finance.	He had always wanted to run his own business. He did not enjoy experience as an employee. Besides, he received a lot of encouragement from his dad who had always wanted to run his own business but never did. He started his self-employment at the age of 19, importing peat from Ireland and selling them to garages. It grew into processing firewood and then selling garden barks for gardens. In brief, he constantly looked for opportunities and ways to improve.	Entrepreneurial

Table 6.1: Value Orientation: Cognitive, Affective, Relational and Structural Embeddedness (Continued)

Entrepreneur	Position in Context	Opportunity Accessibility	Values, aspirations and ambitions as configurative elements	Value Orientation
Henderson	Runs wood chipping business. Wood chipping business had a main customer with whom he had good business dealings with and was looking for ways to recycle their scrap boards.	A demand from an existing customer. Finance from existing businesses.	He had always wanted to take up the challenge of self-employment at an early age. He could see himself building a haulage business and began building the foundations of his ambition step-by-step. At the age of 15, he started to learn how to 'fix' cars; at 16, he practiced painting cars; bought a truck at 21 and 'fixed' it every weekend for 10 years to develop his knowledge in engineering. He pushed his self-employment dream forward in 1979 when he started his timber haulage and forest wood chipping business. He was also a well-known figure, being the Chairman of the Forestry Contractors Association in his locality.	Entrepreneurial
Jamie	Owned a series of different businesses in different industries.	Friendship. Existing waste equipment business developed useful networks, for example, Donside Paper Company and Plastic Association networks. Involvement in recycling exhibitions. Existing business networks. Finance from existing businesses.	The conversation with Jamie suggested that he had not considered any option other than self-employment as his career path. He was merely employed by two companies but it appeared that the employment was taken as a temporary strategy whilst waiting for the 'right' opportunity to come along. He started his self-employment by buying groups of companies from his second employer, and never stopped diversifying from there. He was the most seasoned serial entrepreneur in this study, owning eight small businesses across different industries before he started the recycling business. He enjoys the ' <i>opportunity to be creative</i> ' and is constantly on a look out and acting fast on that.	Entrepreneurial

Table 6.1: Value Orientation: Cognitive, Affective, Relational and Structural Embeddedness (Continued)

Entrepreneur	Position in Context	Opportunity Accessibility	Values, aspirations and ambitions as configurative elements	Value Orientation
Kyrk	Farming background. In a locality where a similar business was thriving. Support from family and friend in similar field.	Family. Friend who was a mentor. Neighbouring businesses who welcomed the idea. Family and bank finance.	He finds studying a torture, left school and worked as a mechanic for 6 months. He was not happy and decided to join his father in the farming business and stayed on with that with his brother, after his father died. He was always on a look out for ways to diversify.	Entrepreneurial
Phyfe	Family background of entrepreneurs. Grandfather was a scrap metal merchant. A number of family businesses running metal recycling operations and skip hire throughout Scotland.	Family. Finance from existing group of companies in the family business.	He has a family history of self-employment, dating as far back as the 1920s with his grandfather, then his father and uncle in the scarp merchant business; and his mother who was running the business of a café and dancehall business. Although involved in these businesses from a very young age, he wanted to avoid formal involvement. He pursued accountancy and entered into employment with a few organisations. But he was never satisfied and eventually surrendered to the fact that formal employment would not satisfy his career aspirations.	Entrepreneurial
Sima	High regard for previous employer deemed as a successful entrepreneur. Brothers' involvement in the recycling business.	Family. Friend who was a mentor. Neighbouring businesses who welcomed the idea. Family and bank finance.	She had worked for 21 years with Grampian Country Food Group under the leadership of a person she deemed was a fantastic entrepreneur. She reckons that it was him who drummed into her the importance of service and quality to customers, and that a business is all about the people. She spoke highly of his principles and entrepreneurial spirit almost as if he was a mentor for her current businesses.	Entrepreneurial

Table 6.1: Value Orientation: Cognitive, Affective, Relational and Structural Embeddedness (Continued)

Entrepreneur	Position in Context	Opportunity Accessibility	Values, aspirations and ambitions as configurative elements	Value Orientation
Skene	Brother-in-law needed financial assistance in the recycling business; Problems in employment; Friend who is knowledgeable in wood matters.	Business was already in operation and run by the brother-in-law; Had the required personal finance to support the business.	Formal employment did not and could not work for him due to his arthritic condition. Self-employment seemed the way out for him.	Entrepreneurial
Sutherland	Father owned a landfill site. Worked as a driver for a transport company. Stayed in a locality where skip hire businesses were growing in popularity.	Parents' business guidance. Personal finance was sufficient to purchase a skip which was sufficient to start the business with him running it alone.	With parents who were 'business-minded' he tended to judge how strategies should be made etc. But it did not appear like it was merely a critical or judgmental mind. It was quite obvious that he had developed personal ambitions and aspirations to 'make it' in self-employment, largely inspired by his parents' foresight in operating the farm and landfill they had. In his critique about his previous employers, there seems to be an implicit desire to be involved in the business in a way an entrepreneur would; a vision of what he wanted to do.	Entrepreneurial
Beiste	Brother's successful franchise. Relationship and marketing managerial positions.	Franchise support; Local enterprise advice; Bank loan; Customer service skills.	He felt that his managerial positions were imbalanced in one way or the other. It was either lack of job satisfaction or lack of a balanced lifestyle with travels involved. He also believed that a career could be well designed to accommodate different aspects of what matters to him, including doing something different, doing it differently, reaching out to customers on a personally basis and generating a good income.	Financial Entrepreneurial Social

End of Table 6.1

Although some literature does not regard networks at the start-up phase as an important influencing factor for subsequent performance (Aldrich and Reese, 1993), the findings in this study show that all the entrepreneurs have the necessary ties which put them in a capable financial, social and business position to access that opportunity.

In a first instance, it may be conveniently assumed that those with employment ties, particularly those with social value orientation engaged in the not-for-profit sector (Daracha, Forbes, Kamden, Tavion) have better ease of access to the opportunity. Daracha's experience provides a useful illustration. Her three year employment as a Driver for RB19 has successfully put her in an advantaged position to assume the Project Coordinator's role. Since RB19 is a community recycling project, it receives a wide range of support in terms of financing and operations issues from Aberdeenshire Council, European Social Funding, large oil companies, other smaller businesses and the public in general. This has enabled Daracha to put into practice her desires to extend her service to the service users via management approaches, business practices, operational procedures and administrative tasks. A similar pattern of 'embeddedness' and their ties therein are also found in Forbes and Kamden whose recycling businesses involve collaborating with Aberdeenshire Council. Furthermore, Tavion explicitly stated that most businesses preferred to use community rather than commercial organisations because the former are cheaper and more likely to enhance the businesses' social and environmental credentials.

However, a closer look at the data revealed that others in the for-profit sector may have equivalent ease of access although in different ways. This is especially true if the entrepreneur has established, existing or potential networks for developing and enhancing the ensuing recycling business. At the same time, the entrepreneur also has various financing resources. It may be the entrepreneur's previous experience (Farlane), existing businesses (Brody, Jock), friendships (Beathas, Skene, and Iver), previous employment (Bean), family (Gilmore, Phye, Jock) or current employment (Struan, Daracha, Forbes, Kamden, Tavion, Ramsey, Garry) which provided a personal social network (Hills *et al.*, 1997). Alternatively, on more formal

grounds such as membership of a franchise (Renaldie, Beiste, Struan) or on very informal grounds, by simply residing in the area (Sutherland) and becoming embedded in that social context (Jack and Anderson, 2002). In some instances, it may be a combination of these factors. For example, Jamie's access to the available opportunity was largely due to his previous employment, friendship with an ex-schoolmate cum colleague and networks established in an existing business selling waste equipment.

In brief, there is an opportunity available to which individuals have access. Whether that opportunity is recognised and enacted and in which ways would depend on the presence of entrepreneurs, the way the entrepreneurs perceive the opportunity and their corresponding actions. The accessibility factor puts the entrepreneurs in an advantageous position. The ability to access the opportunity implies that they can use the opportunity to achieve their entrepreneurial objectives, if other pre-requisites are also met. Together with the presence of contextual opportunities and entrepreneurs, the accessibility factor is an antecedent to the subsequent phases of entrepreneurial agency which manifested the entrepreneurial events in the structure. Thus, in this way, ties play a role in founding entrepreneurial agency.

Some of the entrepreneurs in the study have family influence in terms of access to the opportunity (Goss, 1991; Anderson and Miller, 2003). Gilmore and Kyrk relied heavily on family finance and human capital to start their businesses. Gilmore acknowledged that it was the financial support from his father which enabled him to exploit the opportunity he recognised from the heap of green waste (Aldrich and Zimmer, 1986). Additionally, his wife could handle delivery issues, his mum could work in the administrative area whilst his brother was capable of helping in management, marketing and operations. This demonstrates that his strong ties are of an affective nature (Anderson and Miller, 2003). This is also the case with Phyfe. Although Phyfe does not have a close relationship with his cousins who run similar businesses, he speaks with fondness of his parents' entrepreneurial quests and attributes; and with pride about his grandfather's innovative attitude. Aldrich and Clifford (2003) stressed the role of relations with family

members on the emergence of new business opportunities, opportunity recognition, business start-up decisions and resource mobilisation. In this regard, it may be added that 'family embeddedness' also plays a significant role in the entrepreneurs' access to the opportunity. Family embeddedness thus may be said as a mode of circumstances which are required for effective opportunity recognition and start-ups to take place. It is also necessary to mention that the affective nature of the phenomenon is not restricted to the family ties. Affect, that inward disposition also suggests a feeling which is related to an idea and the value placed upon that idea (Chell, 2008). Affect therefore plays a part in defining the entrepreneur's value orientation. As illustrated in Table 6.1, entrepreneurs whose affective elements are related to social values developed a social value orientation and so on and so forth. Data does not suggest that Gilmore or Phyfe whose affective elements are strongly rooted in their family embeddedness to entrepreneurship possess social value orientation, but suggest that they have an entrepreneurial value orientation.

Table 6.1 also shows there are cognitive factors involved. Those entrepreneurs who did not have interest in school seem to be drawn to the idea of starting their own businesses. Quite often, their families were already running their own businesses (Section 5.3.4.2). It did not matter that those businesses were recycling businesses or not. For others, it may be a question of their employment ties. For example, Kamden and Daracha believed that they suited social work following their experience in the area; or their existing business relationships opened avenues of resource accessibility as mentioned earlier. On the other hand, the entrepreneur may be experiencing some unfavourable circumstances in their social context. Beathas's decision for example, was due to the fact that her husband had been made redundant. Regardless of the type of circumstances which affected them within their social context, the entrepreneurs' aspirations, ambitions and values seem to be the result of their cognition (belief) and affect (feelings, emotions) interacting dynamically with their social context (Chell, 2008). In turn, the entrepreneurs' aspirations, ambitions and values configure their value orientation.

Thus far, the analysis has shown that there are contextual opportunities and there are enterprising individuals (Shane and Venkataraman, 2000), and therefore there is an individual-opportunity nexus (Shane, 2003) and this is the result of the individuals' interchange with their social context. Therefore, the entrepreneur-opportunity interchange was made possible because:

- contextual opportunities are available;
- the entrepreneurs have access to the social and financial resources to tap on the opportunity because of their position in the context;
- the entrepreneurs' relationship with their social context gave rise to certain aspirations, ambitions and values, which are cognitively and affectively related to their social context;
- the entrepreneur may have more than that set of values which configure the value orientation (see Section 5.2.2), but that particular value perception of the recycling opportunity follows the entrepreneurs' position in the context which is cognitively, affectively, relationally and structurally embedded.

6.3 Opportunity Construction

Whilst the researcher's analysis has demonstrated that the opportunity available sprung from a growing green structure and the ease of accessibility depended on the entrepreneurs' relationship therein, not all the entrepreneurs necessarily constructed that opportunity in the same way. In Chapter 5, the notion of value orientation in this study was introduced and detailed. Value orientation, that internal configuration comprising values, beliefs, aspirations and motivations which was reflected in the entrepreneurs' inclination to think, see, understand, be motivated, decide, behave and act was not necessarily the same for all entrepreneurs. Hence, the four categories of value orientation (social, financial, environmental and entrepreneurial) were derived. Further, Chapter 4 has highlighted that the available opportunity sprung from a green order, an outcome of societal concerns about, and responses to, environmental issues. Section 6.2.2 proceeded to show that there was a relationship between the entrepreneurs and this context by virtue of their past and present positions which: firstly, it provides the ties which give them access to the opportunity available; and secondly, their relationship with that context defines the role of

entrepreneurial agency for them by their value orientation. This seemed to suggest three significant aspects of opportunity construction, namely confluence, recognition and interpretation. In light of the different forms of value orientation there is a collision of entrepreneurs' individual values and green values embedded in society. The second aspect highlights the entrepreneurs' recognition of their ability into tap on the opportunity. Thirdly, the entrepreneurs constructed the opportunity according to their individual interpretations and channelled that interpretation into a business form (Anderson, 2000). The phenomenon is illustrated diagrammatically in Figures 6.2(a) (b) and (c). Table 6.2 provides illustrations of the entrepreneurs' individual opportunity construction and demonstrates its linkage with value orientation and business ideation.

Table 6.2: Opportunity Construction

Entrepreneur	Value Orientation	Opportunity Construction	Business Idea
Daracha	Social	Social work interest and background. Employment as Project Coordinator potentially puts her in a privileged position to contribute to RB19 and feed her interests in advancing her social work experience.	Social
Forbes	Social	Social work interest and background. Together with his team, saw an avenue to create work for the trainees because of the huge amounts of aluminium cans, and potentially successful support from European Social Funding and Aberdeenshire Council.	Social
Kamden	Social	Taking up the position as General Manager would give him an opportunity to weave both his knowledge in wood works and business with his interest in pursuing social work.	Social
Struan	Social	His entrepreneurial quest began only after his employment as General Manager. He deemed himself as an ordinary member of the public that had been 'conned' before he took up the job. In that role, he could commit himself to enhance consumers' awareness.	Social
Tavion	Social	Employment as Project Manager allowed him to address two core interests: voluntary work and IT expertise.	Social

Table 6.2: Opportunity Construction (Continued)

Entrepreneur	Value Orientation	Opportunity Construction	Business Idea
Garry	Green	His personal aspiration is to be both an environmentalist, run a good business and generate revenues for the business. He takes environmental issues extremely seriously and to ensure that operations adhere to the highest environmental standards, as opposed to finding ways to get round regulations. He reckons that he is able to strike a good balance in RB20 and is happy to be there.	Green
Iver	Green	Invited by Skene to join a partnership with him also involving his brother-in-law because of his technical knowledge in wood . Viewed recycling as upholding his principle to minimise waste at all times.	Green
Beathas	Financial	An option for the husband to venture into having been retrenched from the oil industry because of the networks that he has established.	Financial
Brody	Financial	Profit generated from recycled protectors was way higher than virgin protectors because of cost savings and production time. Hence, he was able to set a low market price for sale of recycled protectors.	Financial
Gilmat	Financial	A diversification from his existing construction business which will be a cost savings avenue for the business by recycling construction wastes into aggregates.	Financial
Jock	Financial	Development of haulage business. Recognised the potential to reprocess glass which he deemed as relatively simple, specifically green glass which has decreased in its value due to the massive volume and to avoid high transportation costs to Alloa.	Financial
Ramsey	Financial	Employers' problem in sending used protectors to and fro for refurbishment was an opportunity for additional income if he could provide the refurbishment service.	Financial
Renaldie	Financial	The massive use of recycled cartridges in the banking industry in Argentina prompted him the potential for money-making. He could also tap into his English wife's participation in various associations to grow his business networks.	Financial

Table 6.2: Opportunity Construction (Continued)

Entrepreneur	Value Orientation	Opportunity Construction	Business Idea
Bean	Entrepreneurial	He bought the company which was put for sale after being an employee for 35 years because he always favoured self-employment and loved the metal industry.	Entrepreneurial
Carlton	Entrepreneurial	Diversification of his self-employment into recycling of ELVs was to suit the son's interest. Later, the recycling business diversified and concentrated on recycling tyres to avoid landfill issues.	Entrepreneurial
Farlane	Entrepreneurial	Lever heard about his business of manufacturing chemicals for efficient cleaning approached him to take in their end materials. Later on, Robert McBride became his largest customer. Recycling of used cooking oil into bio-fuel was seen as an opportunity to tap into his technical knowledge, create an innovative and competitive edge and at the same time address the rising energy issues.	Entrepreneurial
Gilmore	Entrepreneurial	Recognised that he could provide a solution to an existing problem; and at the same time, an opportunity for him to move forward with his self-employment intentions.	Entrepreneurial
Henderson	Entrepreneurial	Requested by his main customer who enjoyed their business dealings to do wood recycling; It enabled him to diversify his self-employment options.	Entrepreneurial
Jamie	Entrepreneurial	Interested in business opportunities, collaborated with an ex-schoolmate cum colleague to buy over employer's company which started off as a business selling waste equipment. This later on diversified into paper recycling with Donside Paper Co., which subsequently went into liquidation. Looked into other options of recycling and continued with plastic recycling. Recently bought the paper recycling site owned by Paper Gone Paperboard with intentions of running a large paper recycling business.	Entrepreneurial
Kyrk	Entrepreneurial	Looking for ways to diversify from farming. Was drawn into skip hire and recycling because of exhibitions in Ireland and Birmingham. Additionally, supply of waste materials looked far too much for the one company which offered that service in the area.	Entrepreneurial

Table 6.2: Opportunity Construction (Continued)

Entrepreneur	Value Orientation	Opportunity Construction	Business Idea
Phyfe	Entrepreneurial	Was asked to run the new site in Fraserburgh as part of the family business' expansion. At the same time, he was facing job dissatisfaction and that was a self-employment option.	Entrepreneurial
Sima	Entrepreneurial	Having resigned from her Board position in an established company, she wanted to be an entrepreneur. She owned a food consultancy business and her involvement in the recycling business was to help her brothers as well as to diversify her entrepreneurial avenues.	Entrepreneurial
Skene	Entrepreneurial	A self-employment solution to overcome his employment issues because of arthritis and he could make use of his friend's knowledge about wood to run and grow the business.	Entrepreneurial
Sutherland	Entrepreneurial	Observed that many people were doing skip hire businesses and have sustained them despite the complaints. He was jobless and saw that it was an option which he could venture. He was also confident that he could start it with minimum capital.	Entrepreneurial
Beiste	Financial Entrepreneurial Social	His brother's triumph in a similar franchise attracted him. He saw the potential to make money because he could offer same quality cartridges at a much lower price. He also saw that this was an opportunity to do something different and in a different way, especially in serving customers in a more personal and attentive manner.	Financial Entrepreneurial Social

End of Table 6.2

6.3.1 Confluence

The presence of entrepreneurs with their individual value orientations and society's green concerns implies that there is a collision of values between the entrepreneur and context (Figure 6.2a).

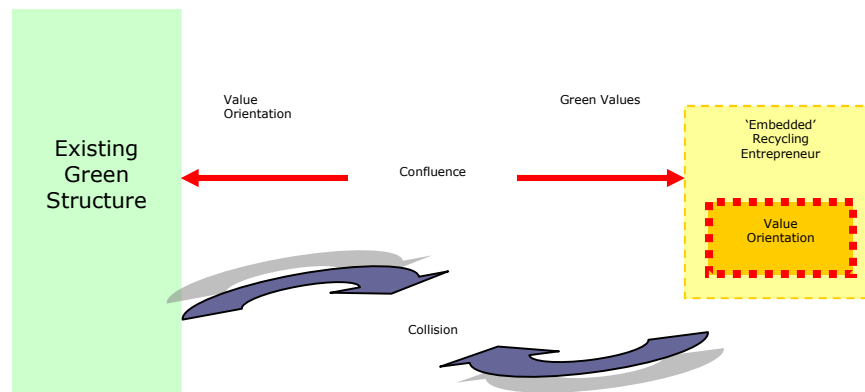


Figure 6.2(a): Opportunity Construction: Confluence (Source: Author)

Most of the entrepreneurs were aware and supported recycling because they see it as a positive contribution to the environment. They may be concerned and have an interest in environmental issues. However, this is not related to the way they perceive the recycling opportunity. The formation of their recycling businesses was not an expression of their concern for, or awareness of, environmental issues and they were not motivated by green reasons. Additionally, there are also entrepreneurs who started with neither interest nor concern about environmental issues. For example, Daracha and Forbes admitted their ignorance on green issues and the possible role of recycling operations prior to their engagements in the business. Further, Beathas shocked the researcher in the informal chat during the drive offered by her from Fraserburgh back to Aberdeen. She appeared certain that her business of cleaning drums and barrels, and the recycling of waste oil did not contribute positively to the environment. Instead, she appeared to believe that the complicated processes were harmful to the environment.

The entrepreneur does not stand within the boundaries of a thick box that separates him or her from society. This implies a collision of values between the entrepreneur and society's. Thus, a confluence between the internal entrepreneur's individual values (which are not necessarily green) and the external green values embedded in society occurs. Confluence has

significant implications to subsequent entrepreneurial events for example in the interpretation (Section 6.3.3) of, and adaptation (Section 6.4.2) to, the context. These will be explored as the ensuing sub-sections of this Chapter unfolds.

6.3.2 Recognition

Recognition refers to the entrepreneurs' belief that they have identified an opportunity and their knowledge of the opportunity. Their knowledge comprises the knowledge and understanding of the structure in accordance with their position therein, as well as awareness of their ability to extract what is externally available in the green order so that the value perceived in the recycling opportunity may be extracted and created. In other words, entrepreneurs recognise their ability to act because of their ties (past, present and foreseeable) with the context which would provide the requisite financial and social resources; and they are aware of their potential to create that value perceived via the ensuing venture.

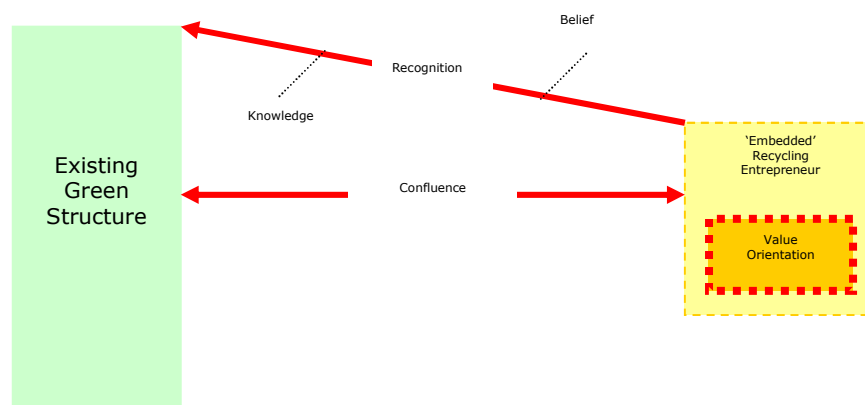


Figure 6.2(b): Opportunity Construction: Recognition (Source: Author)

Gilmore's experience gives a comprehensive illustration of the above description of recognition. In a first instance, he recognised the opportunity to grow and diversify his existing bark screening business having seen the heap of green waste at the Aberdeenshire City Council. He also recognised

his ability to exploit that opportunity. He saw that he was able to offer a solution to an existing problem faced by the Council for a few reasons. First, his current bark screening business in the area could provide some basic necessities such as equipment and operating space. Secondly, his father was able to provide him the requisite financing, training and education for running a business. Lastly, he recognised that he was able to get a supply of green waste from the Council judging by their need for a solution to the disposal issue.

Gilmore therefore saw his 'fit' to gain a contextual competitive advantage because of the needs of the situation. To a certain extent, this form of recognition may be said to be an intuitive state of knowledge and understanding. Gilmore knew and understood the problems of disposal, as well as his ability to exploit these societal problems in order to meet his entrepreneurial objectives (Baron, 2004) and progress in his self-employment status. He understood the need to and how he may embed himself (Jack and Anderson, 2002) to be part of that structure.

The understanding of the nature of the green structure taking place during the recognition of his ability may imply that it is a part of the embedding process. Nonetheless, it may be argued that this is a passive form of embedding. On its own, it bears very little significance and has no impact on the entrepreneurial process. However, like accessibility, it is an antecedent to the ensuing entrepreneurial events to take place. The difference is that the former concerns the entrepreneur's innate knowledge and the latter concerns a particular configuration of circumstances.

Perhaps it is also necessary to mention that elements in some existing models of entrepreneurial opportunity recognition overlap with the recognition notion in this instance, particularly the elements which emanate from cognitive psychology (De Koning, 1999). However, it is not the intention of this study to either provide insights into or develop the already numerous models of opportunity recognition which are often conflicting (Ardichivili *et al.*, 2003). An important element during recognition that needs to be highlighted in this present analysis encompasses two points:

- Firstly, the process of opportunity recognition also includes the entrepreneur's recognition of his or her abilities to carry out the business idea. This is strongly influenced by the patterns of interactive processes with the context. The extant entrepreneurship literature has often linked opportunity recognition to the entrepreneurs' knowledge, abilities and skills. However, recognition of knowledge, abilities and skills allows the process of effectuation (Sarasvathy, 2001) so that the entrepreneur can use them to discover and exploit various contingencies in the structure; whereas mere possession of knowledge, abilities and skills do not necessarily confer any benefit;
- Secondly, recognition plays an important part in the entrepreneurs' decision to start the recycling business. The link between the recognition process and value orientation affirms the idiosyncratic nature of opportunities (Sarason *et al.*, 2006), especially prevalent in the recycling industry due to the different types of contextual opportunities available.

6.3.3 Interpretation

Whilst the emerging green order was present in one context, it was not interpreted in the same way by all the entrepreneurs given that there are different forms of value perception. Instead, it was an interpretation based on value orientation. Entrepreneurs with social value orientation interpreted opportunity available in the green order and their capabilities in the context as conducive for the enactment and creation of social values. In the same way those with financial, entrepreneurial and green value orientations interpreted their environments to create financial, entrepreneurial and green values. Thus, we see different constructions of one reality: the recycling opportunity in that green order in one same context.

A diagrammatic representation of the interplay between contextual opportunities in the green structure and the entrepreneur's individual value that results in the formation of the recycling business is provided in Figure 6.2c.

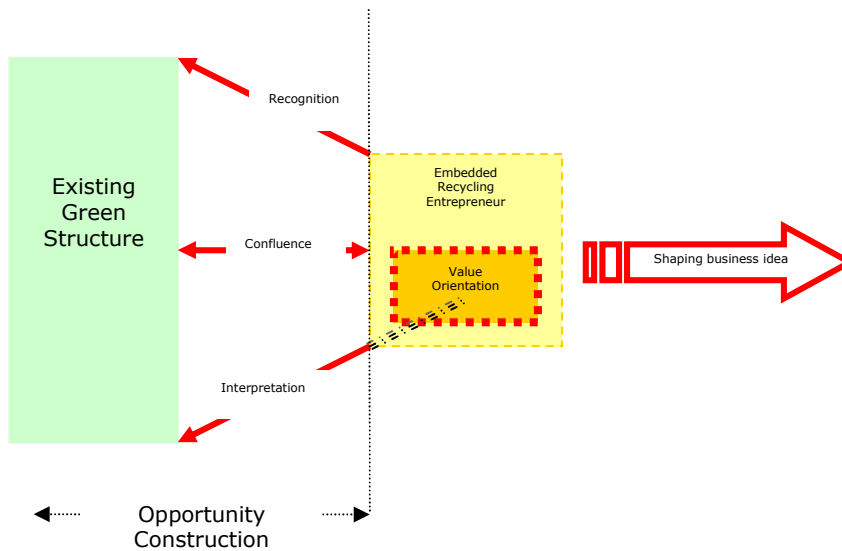


Figure 6.2c: Opportunity Construction: Interpretation (Source: Author)

Most decisions to start up something are affected by how founders perceive and interpret the meaning of opportunity (Sarason *et al.*, 2006) from the environment (Bird and Jelinek, 1988). Within the context of this study, this follows the sense making of their experiences (Gartner *et al.*, 2003). The interactive processes between their cognition, affect and social context configures their beliefs, ambitions, aspirations and values (Sections 6.2 and 6.3.2). Interpretation thus undergoes a 'conditioning' of the individual value orientation and gives meaning to the recycling opportunity, the structure and the business idea (Chell, 2009) and is driven by individual motivations (Licht and Siegel, 2005) which are underpinned by the value orientation.

6.4 Enactment

Whilst the accessibility factor is that particular mode of circumstances which enables access to the opportunity, recognition is that intuitive level of knowledge to utilise the opportunity, interpretation gives meaning to the structure, and enactment is the entrepreneurial agency in action. Enactment is the workings between the entrepreneur and context in a dynamic and circular relationship that is aimed at the extraction and creation of the value perceived in the recycling opportunity. It represents that phase of entrepreneurial agency following the business ideation. A summary of data in evidence of the entrepreneurial agency in action

reflecting the adaptation, adoption, the forging of ties and value output is tabulated in Table 6.3. Furthermore, diagrammatic representations (Figures 6.3a, b, c and d) have been used to assist in illustrating the phenomenon.

6.4.1 Business Formation

The meaning interpreted from the environment is channelled into a latent business form (Anderson, 2000) through the entrepreneur's engagement in activities to further the business idea (Aldrich, 1999). As shown in Table 6.3, the entrepreneurs with a social value orientation formed their recycling business based on social objectives and so on and so forth. The entrepreneurs recognised their ability to exploit the opportunity by utilising the green structure to extract and create social, financial, entrepreneurial or environmental values. Consequently, the ensuing ventures represented these different constructions of the opportunity that existed for the purpose of harvesting the value perceived through enactment. The ensuing venture is thus a medium to extract what the structure has to offer. In other words, to transform the confluence of values between the entrepreneur and society, the recognition of their ability and their interpretations of the environment into action so that the value perceived may be created. Thus, the ventures reflect different constructions which are channelled into business form by the aspiring entrepreneur either via the start-up of a new recycling business or through his or her engagement in an existing recycling business. The recycling business was intended to reflect those values perceived (Anderson, 2000) through utilisation of the green structure.

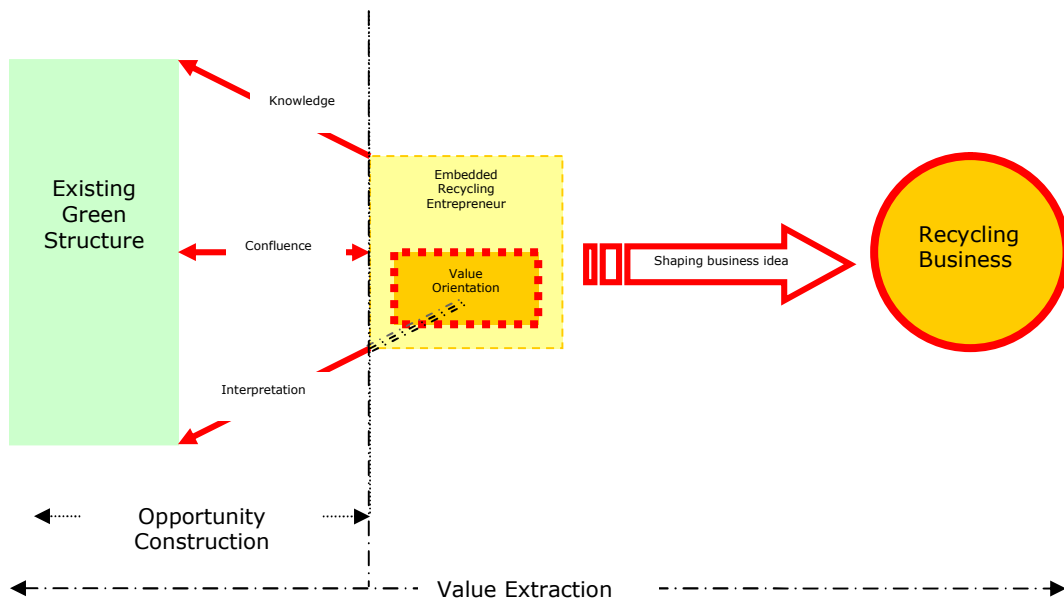


Figure 6.3a: Enactment: Business Formation

On the one hand, the recycling business can be seen as a tangible evidence of the confluence between the internal and external. On the other hand, it is the enactment of the entrepreneurs' interpretation of the structure (Anderson, 2000).

6.4.2 Harmonisation: Adaptation and Adoption

One of the most significant implications of the confluence of entrepreneurs' individual values and society's green values for subsequent entrepreneurial events is the harmonisation of entrepreneurs' values with those of society. Specifically, it explores the ways in which values may be harmonised and in that, it enables the utilisation of structure to create the value perceived in the opportunity. Figure 6.3b shows how harmonisation and utilisation fit into the value extraction and creation processes (Anderson, 1998; Anderson, 2000) and the ensuing parts of this Section will elaborate further on the phenomenon.

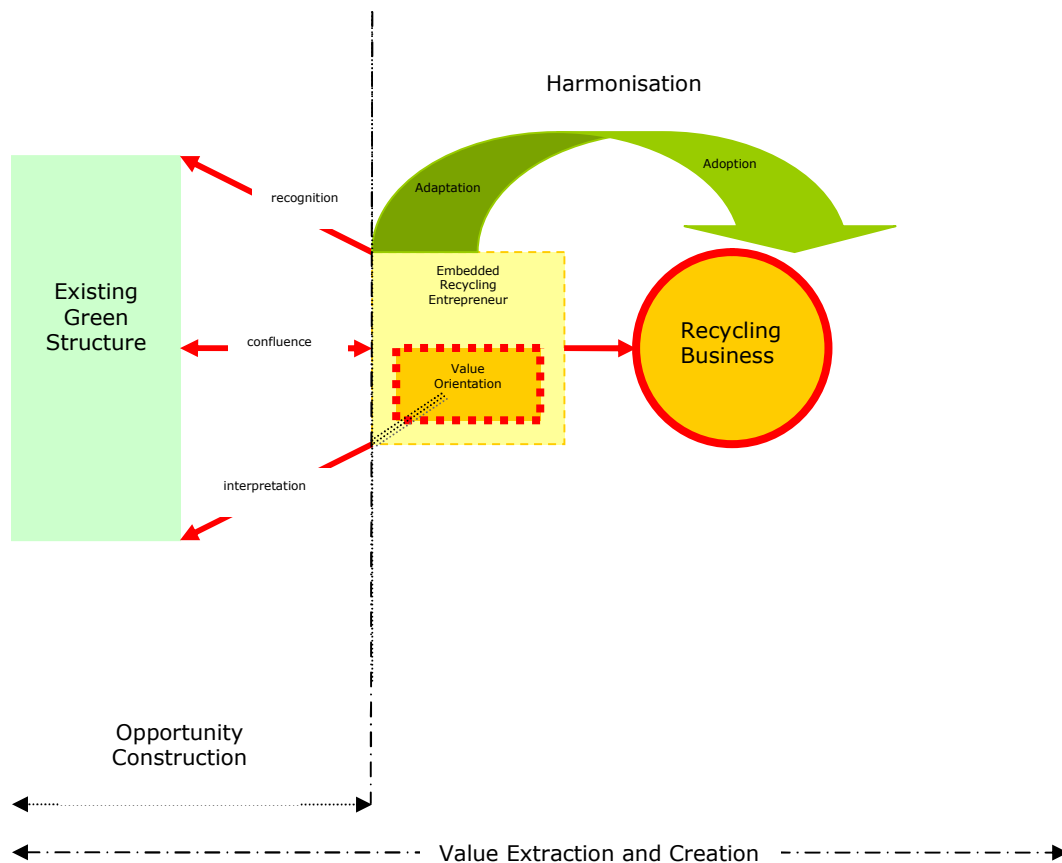


Figure 6.3b: Enactment: Harmonisation (Source: Author)

Three perspectives are highlighted in the harmonisation of values. These are the adaptation that takes place at an initial phase of 'accept-as-it-is'; a later phase of minded behaviour; and the adoption of green value orientation (see Table 6.2).

6.4.2.1 Adaptation: Accept-as-it-is

Given the collision of values between entrepreneurs and society, adaptation in this scenario does not appear to be an option. To operate in that structure which emerged from an apparent green order but the entrepreneurs being paradoxically and fundamentally not inclined to green orientation or objectives seems to suggest a necessity or willingness and the act of adapting in the desire to enact and create that value perceived in the recycling opportunity. The rationale seems to be that the values entrepreneurs perceive and want to create do not match the green values

embedded in the society. Yet, that is the context they would potentially operate in. Thus, they would have to adapt to be a part of that green order, present themselves as that and act as if they are part of it. This seems to be a pre-requisite so that the opportunity available and accessible can be tapped in order to enable extraction and the potential realisation of individual values which may not necessarily be business goals for those entrepreneurs who are not owner-managers. Put simply, it reflects the maxim: *'when in Rome, do as the Romans do'*.

Adaptation in this instance does not concern so much a situation of adaptive learning (Rae and Carswell, 2000; 2001) although relationships between the entrepreneur and values are involved. The emphasis of the adaptation in the context of this study is one of logical necessity and the decision to stick with their business idea (Section 6.3.3). Straightforwardly, it means that the entrepreneur faces a situation in which their values are in opposition to society's. Yet, they see an opportunity there which they want to tap and create a particular value which is not the same as society's values. The question arises thus: how do they get on or move on with this situation?

Data suggests that the first step is about making a choice to stick to their business idea, a willingness to 'accept-as-it-is' and go with the situation. Anderson (2000a) described entrepreneurship as protean, changing its shape to suit the environment. In this respect, it seems then that the notion of adaptation here may borrow the notion of *'fitting self into the circumstance'* but it appears that Anderson's (2000a) argument revolved around the action of the entrepreneur. On the other hand, adaptation in this instance is a response, an action which is not yet in action. Figure 6.3b provides a diagrammatic representation of how adaptation fits into the entrepreneurial process and the following illustrations will clarify the foregoing discussion.

Tavion coveted the position of Project Manager in RB11 because of his interest in voluntary work and competency in information technology. He thus adapted to the business' environmental aims which included stopping computer equipment going into landfill. This was backed by his principle of

professional responsibility to the Board of Directors. In that, he set out to spread green awareness to the public via BEP-NE's breakfast meetings, the day-to-day operations of RB11 and explanations about recycling practices to the general public. His logic was simply that he was employed in that position to lead a business which has both social and environmental objectives. Henderson adapted to the demands of his main customer, a large producer of wood based panels who wanted a solution to the problem of disposal of their wood waste. Along similar lines, Jock ventured into recycling because Moray Council, a valued customer for his vehicle servicing business, was sub-contracting waste collection services. He either had to adapt to Moray Council's needs or lose the opportunity of collaborating with the Council in order to grow his haulage business. For Farlane and Gilmore, it may be regarded that they were willing to adapt to society's needs but with entrepreneurial motives!

It appears then that adaptation is critical in the entrepreneurial process. However, some have argued that creativity should be at the core of entrepreneurship. After all, Joseph Schumpeter chose to popularise the term creative destruction. Nonetheless, it may be argued that the examples above illustrate that adaptation is required in order to execute creativity. Enactment thus may be deemed as entrepreneurial action which is driven by value orientation and enabled by adaptation.

6.4.2.2 Adaptation: Minded Behaviour

However, adaptation also formed part of that entrepreneurial action. In other words, the entrepreneurs had to adapt in order to act but in acting they were also adapting. Relating to the earlier discussion in this Section regarding the fitting of self into circumstance, it is the latter that coincides with Anderson (2000).

Entrepreneurs may have increased awareness or even incorporated environmental goals into their operations. However, their value orientation i.e. the way in which the opportunity is perceived remains the same as that during the business formation phase (see Table 6.3). Their interest was in

as far as it serves to realise the values perceived, or simply held the opinion that recycling was necessary because it was all over the world (Ramsey).

Adaptation is part of the embedding process, so that the link with the green structure is maintained (Jack and Anderson, 2002). Please refer to Section 6.4.3 for examples of how the entrepreneurs mindfully adapted their behaviour by forging and/ or maintaining green ties; and by their green behaviour.

6.4.2.3 Adoption of Green Value Orientation

This part explores the purposive enactment of greening through the inculcation of green value orientation. This involves understanding the process of adopting green values and the effects of this on the entrepreneur's business practices. The latter simply means subsequent re-shaping of the recycling business via a balancing of attitude, approach, behaviour and action during the phase between the initial value orientation and the subsequent green value orientation.

Data suggests that adoption as an unintended occurrence, which is not defined by the entrepreneurs' initial value orientation. For example, it cannot be claimed that because Daracha is social value orientated, there is a higher probability that she will adopt green value orientation in a later phase of the entrepreneurial process. Table 6.3 shows that Daracha, Gilmore, Farlane, Carlton, Kyrk and Sima adopted green value orientation subsequent to their enactment. Some illustrations of the dynamics during adaptation, the value extraction and the creation processes which led to adoption and the dynamics which took place during adoption are provided below. This revolved around issues which caused the change (the how and why of the adoption) and the entrepreneurs' responses thereto.

Daracha's main interest was social work. Therefore, she coveted the Project Coordinator position with RB19. In that role, she adapted to the recycling initiatives of RB19, created a network of supporting relationships such as that involving British Plastics, and adopted innovative approaches to expand, diversify and enhance operations. As shown in Table 6.2, she had

absolutely no interest in greening or recycling when she first took the position. However, by the time of the researcher undertook fieldwork (seven years later), she had become inspired to contribute to environmental sustainability. She attributed the change to her role in RB19: *'because it was part of the job, we think about it a bit more.'* Thus, Daracha's adaptation to the structure (her role in RB19, RB19's role in meeting businesses' demands for their services and RB19's subsequent 50:50 prioritisation between social work and recycling) had played a role in her adoption of a green value orientation.

Likewise Daracha, Gilmore came from a situation of utter ignorance about recycling technicalities and no interest in environmental issues. He was the recycling entrepreneur that was most spoken about by other informants to the researcher. He was also the first person recommended by Guy Robertson from BEP-NE, the organisation with which the researcher collaborated to undertake her fieldwork. In Guy's opinion, Gilmore managed the most flourishing recycling operation in the region. Other informants who were interviewed also made the same recommendation. Gilmore's composting site is the only composting site in the North East of Scotland. It is well-known as an alternative to landfill for disposal of green waste. He started off with a contract with Aberdeenshire Council for green waste disposal and proceeded to win similar contracts with four other local councils. He had also obtained PAS100, an accreditation which complied with regulatory requirements in order to ensure that compost would not be classified as waste but as usable final product in its own right. Although the researcher's encounter and conversations with him suggested that these dedications and achievements had much to do with his entrepreneurial desires, it was later on revealed that he perceived his role as that of a provider of green waste solution to help diversification from landfill in an environmentally friendly manner.

Kyrk and Sima who were aware of environmental issues and the possible contributions of recycling did not get involved in recycling (or other environmentally friendly) practices prior to the formation of their recycling business. Within a period of six months after the start-up of their recycling

business, their attitudes changed in three notable ways. First, they initiated recycling practices in their own households. Secondly, they aspired to contribute to landfill diversification '*because we want it to last as long as it can*' and to promote resource sufficiency and protect future generations. Thirdly, they wanted to respond to the needs of the increasing number of members of the public who wanted to recycle. Their view was that recycling was a need and if able, one should do something to promote and encourage the practice.

From a humble (relative to his other businesses) recycling of end-of-life vehicles business, Carlton diversified and emerged as the largest tyre recycling business in Scotland. In the beginning, used tyres throughout Scotland were sent to (or collected by) him. The used tyres underwent various processes from grading and segregating according to quality, to exporting to selected countries and making tyre chips for use in horse arenas. Carlton's initial greening attitude differed from those of both Daracha and Gilmore in that his background in landfill engineering had provided him with a degree of environmental awareness and created an environmentally conscious attitude. However, it was only further on in his enactment that he integrated his care and concern into the recycling business. This was done '*so that there are other environmental uses for tyre chips as well*'. Thus, he ventured into a Project with Fife Council via Scottish Agricultural College and worked with a Professor in America to develop the use of tyre chips for landfill engineering and energy generation activities.

Farlane's venture into the recycling of end materials of quality soap powder into powder of inferior quality took off as a diversification from his other self-employment activities following recommendations from friends and previous business associates. However, during the course of running the recycling soap powder operation he grew increasingly concerned about energy issues emphasised in the media. He critiqued the lack of emphasis in the education system to address global warming issues and then took steps to contribute via his recycling operations. At the time of the interview, he was in the early stages of setting up the plant for the recycling of used cooking oil into bio fuel.

The above examples show a genuine adoption of a green value orientation and the resulting adaptation to the business objectives in line with that. That is to say Daracha, Gilmore, Kyrk, Sima, Carlton and Farlane all integrated green aspirations into their roles within the recycling businesses. Daracha for instance, acknowledged that her limited knowledge in recycling issues would be an obstruction and took steps to improve. Her associations with British Plastics to learn about the technicalities involved in plastic recycling.

In this part, the entrepreneurs' recycling businesses represent green-ness which sprang from a genuine adoption of green values and a corresponding way of seeing and understanding the recycling business as an opportunity to do environmental good. This has been re-balanced with corresponding procedures to incorporate that change in the recycling business.

Genuine adoption of a green value orientation is different from entrepreneurs who appear to have green aspirations. For example, Brody often mentioned his dislike for seeing used protectors moved into landfill before he embarked in his recycling business. He also often related his recycling operations to his pride in contributing to the diversification from landfill. However for Brody, pride was as far as it went where greening and his recycling business are concerned. His efforts and emphasis were clearly focused on making money. It is also interesting to mention that Henderson has further green aspirations which he related to a potential diversification of his recycling operation to incineration.

This Section has illustrated the different ways in which entrepreneurs adapt and how they may adopt a subsequent value orientation following enactment. Despite these different ways of harmonisation, it was found (see Section 6.5) that the outcomes of the green values created appear to be similar. Meanwhile, the next Section explores another core aspect of value extraction and creation that was made possible only through the two stages of adaptation, namely the utilisation of structure to create the value perceived in the recycling opportunity. The entrepreneurs underwent a

process of harmonisation with the green structure in order to forge and/or maintain green ties so that the green structure can be utilised to exploit the opportunity recognised.

6.4.3 Utilisation: Forging and Maintaining Ties

In the most basic sense, this phase of enactment can be observed during the day-to-day running of the business, the entrepreneurial activities, strategies and decision-making. In that process, the entrepreneur embeds (Jack and Anderson, 2002) as part of the green structure despite the collision of values. Data seems to suggest that the mechanism for utilisation is the forging and maintenance of ties (see Table 6.3, Column: Value Creation and Extraction Processes). Figure 6.3c provides a diagrammatic representation of how this fits into the entrepreneurial process. This is followed by some illustrations from the data which show the manner in which ties are forged in order to utilise structure.

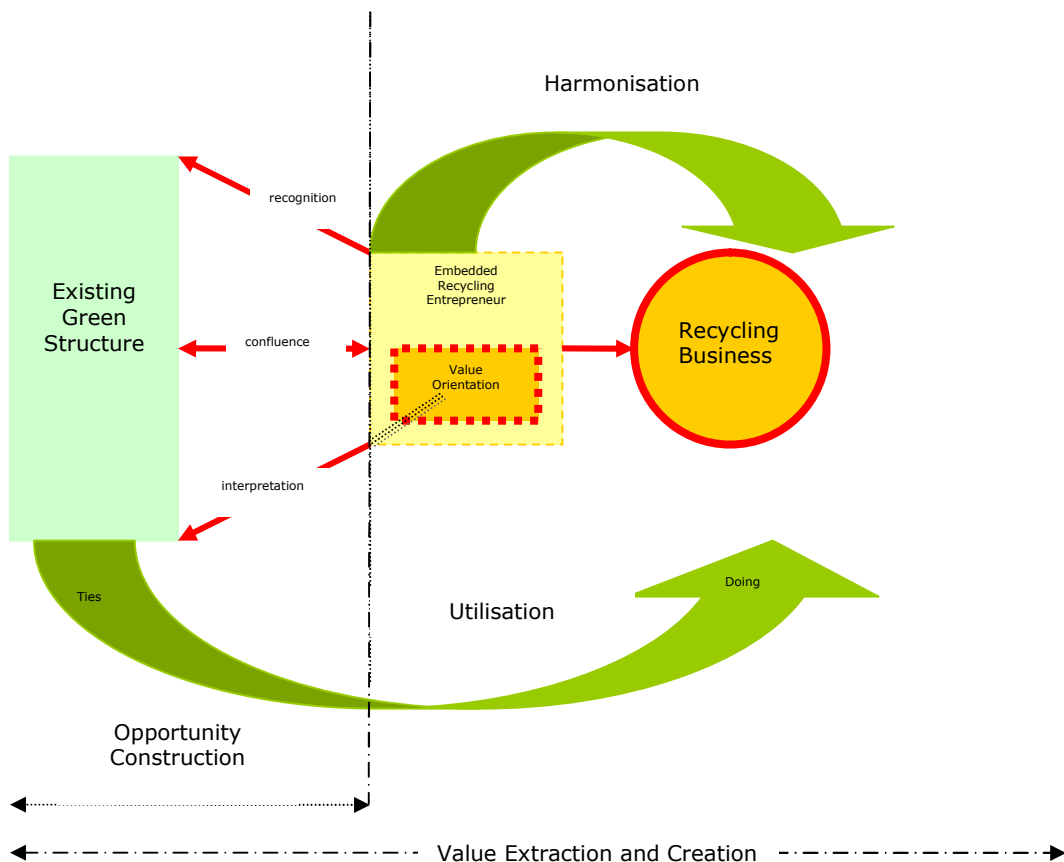


Figure 6.3c: Enactment: Utilisation (Source: Author)

Forbes' associations and efforts exerted to meet Enviroco's waste management needs have secured RB18 a large supply of aluminium cans from the offshore industry as well as Enviroco's collaboration to excel in green competitions. Daracha's association with BPI, the largest plastic recycling operation in the UK, has resulted in helpful advice on plastic recycling. Collaborations have also been made with Aberdeenshire Council to include public education programmes and possible expansion to incorporate household collection in RB19's activities. Both Tavion and Gilmore developed relationships with BEP-NE which helped as an awareness raising profile. Kyrk and Sima's friendship with Bruce Stuart who ran a big recycling operation in Dundee resulted in inspiration and encouragement during start-up challenges. Farlane is currently discussing with restaurants and firms in the offshore industry on the supply of used cooking oil, and also with various people including the staff of Aberdeenshire Council on the production of bio fuel to help in his potential operation. In a similar vein, Beathas's husband is committed to develop good relationships with his business associates during his employment in the offshore industry who sought services to recycle waste oil and to clean intermediate bulk containers (IBCs). Cassandra (Renaldie's wife) is now actively involved with the Business Network Association with a view to increase the customer base of their business.

Some ties already exist such that the above efforts are not necessary. Examples of these are employment ties, family ties or existing friendship ties. In such instances, they are maintained or developed in order to meet the businesses' objectives. For instance, the ties which Daracha, Forbes and Kamden forged with Aberdeenshire Council supported the financing, management and operations of the businesses. This may be developed further via team work with the line manager from the Council in decision-making or problem solving. Another example is the development of relationships between Renaldie, Struan and Beiste with the franchise's headquarters to receive technical support in assisting the efficiency of their cartridge and toner recycling businesses.

However, the forging of ties need not be confined to physical ties. The ties can be weak ties in the form of virtual networks. In Section 5.3.4.4, it has been mentioned that Farlane built his idea of the recycling of bio fuel from researching the Internet to add to his competitive knowledge about bio fuels. He also talked about his disenchantment with the education system which in his opinion appears to prioritise media and communication when energy issues increasingly demand attention. In this instance, the Internet and the media may be considered as Farlane's weak ties by which he forged and maintained through continuous interests. He thus gained knowledge of the structure and environmental issues with his entrepreneurial vision.

To re-state the point made in the preceding Sections, the acts of forging and maintaining ties are active forms of interpretation. It is a way of embedding (Jack and Anderson, 2002) by fitting themselves into the green structure (Anderson, 2000a). In doing so, they are able to use the green structure to tap into the opportunities it provides so that the value(s) they perceive can be created.

6.4.4 Motivation: Value Orientation (Predominant) Driven Enactment

A crucial point noted was that where entrepreneurs have adopted a green value orientation following enactment, their bottom line i.e. their driving force remains with their initial value orientation. That is to say, the entrepreneurs' initial value stood above any other additional value that may be inculcated following enactment. This point has been mentioned in Section 5.5 but a deeper analysis is presented in this Section.

The main point of this Section is that enactment is value driven. This means that the initial value orientation is the driving force of enactment. This appeared to be a commonality amongst the entrepreneurs studied regardless of their motives, motivation or the changes that took place during enactment. Additionally, it seems true irrespective of whether or not a green value orientation has been adopted subsequent to enactment.

The entrepreneurs' bottom line is to realise the value perceived in the recycling opportunity. They become part of the green structure although the business is shaped by their value orientation; the value they perceive in the recycling opportunity and want to create. For example, Carlton has been exposed to green issues for a long time due to his vast and long-term experience in landfill engineering. Nevertheless, the start-up of the recycling of end-of-life vehicles business and subsequently the massive tyre recycling operation was spurred on by his desire to diversify his entrepreneurial ventures and to support his son who was desperate to be involved. Brody also provided an interesting example. A manufacturer of virgin protectors for more than fifteen years, he was disenchanted with the waste of money and energy from moving used protectors into landfill. Nonetheless, it was that one occasion to meet a customer's demand in quantity and speed of delivery which started his recycling division. The massive profits then spurred him further into it.

The motive for enactment at the initial episode of enactment (when the informant began his or her engagement as an entrepreneur in the recycling business) is shown to be driven by the entrepreneur's value orientation. Opportunity is available because of society's overarching emphasis on greening, political responses and subsequent socio-economic and socio-cultural implications (Chapter 4). In Section 6.3.3, it has been said that the entrepreneurs interpreted the environment and therefore the opportunity was constructed according to their value orientation. However, the role of value orientation continues and it defines the direction adopted by entrepreneurs during enactment. Every decision and action was made with this value as the end in mind. If enactment is a trajectory, then the enactment journey is the path and value orientation is the driver moving along in a continuum over time. Sometimes it constructs new realities of the recycling opportunity and other times, it does not. However, irrespective of whether new realities have been created or not, it still remains that the initial value is predominant and gives meaning to the entrepreneurs (see Figure 6.3d). The entrepreneurs studied wanted to sustain and enhance the business for the sake of that value. For them, the bottom line remains with that value (see Table 6.3, p. 262-272).

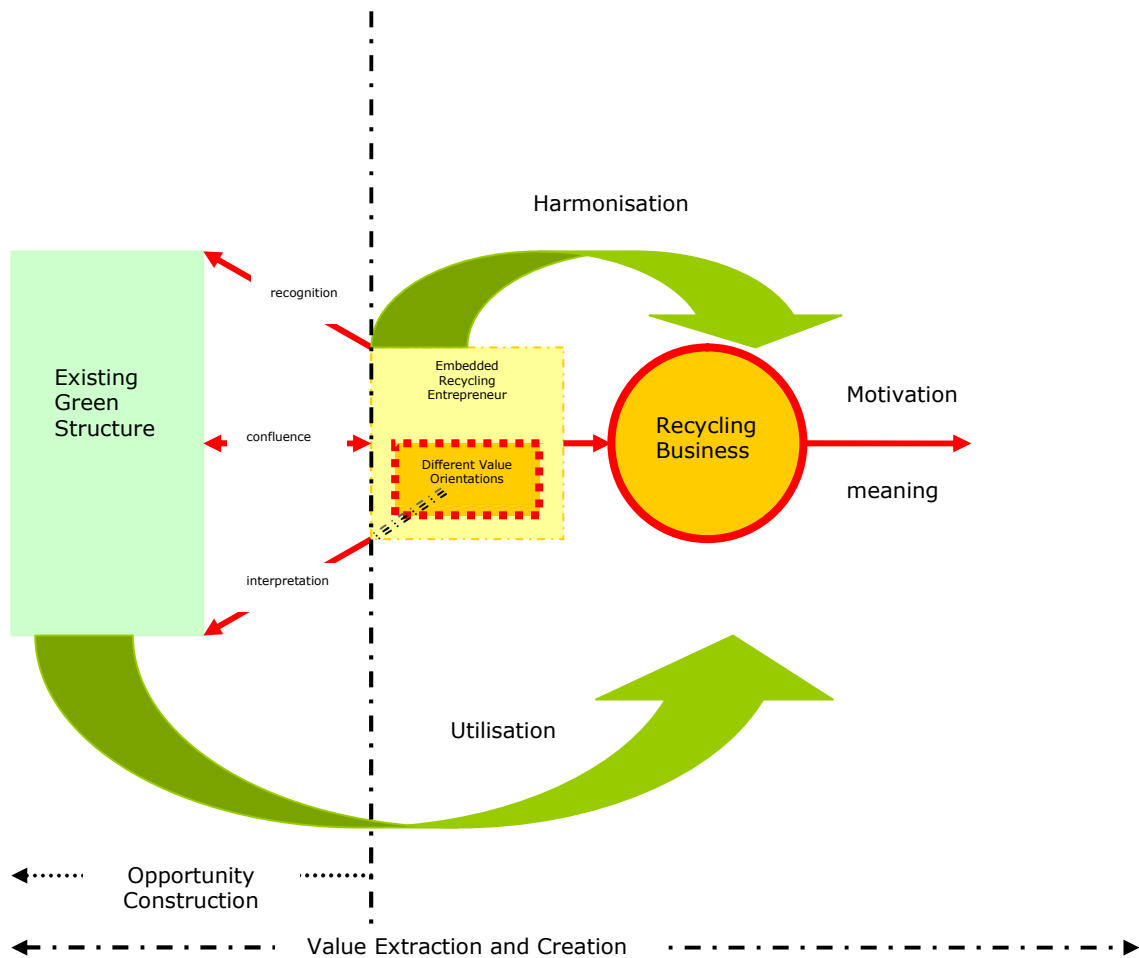


Figure 6.3d: Enactment: Motivation (Source: Author)

Briefly, those with an entrepreneurial value orientation have been motivated by the desire to see results. On the other hand, the inclination of social value orientated entrepreneurs engaged in the not-for-profit enterprises has been to sustain the business as a going concern for continuing work creation for people with learning difficulties and physical disabilities. The diversification and concentration of Brody's and Jock's businesses to include recycling operations which was solely to reap relatively huge profits. It was in this motive, underpinned by their value orientation that they adapted themselves to the demands and needs of the green structure and not the persuasion of society and businesses or any green aspirations. Thus, where there are no internally configured green values or subsequent adoption following enactment, it is the initial value orientation that has been the

driving force of enactment throughout. Further, it might be useful to add that both Forbes and Kamden developed good relationships with waste management companies who were seeking avenues for environmentally friendly disposal of materials. However, the development of these ties was not because they like green people or for the sake of being green. These ties secure supply and demand, as well as promotion of the on-going operations and development so that their social goals may be realised. On the other hand, Henderson's main concern for the recycling business was its use as a tool to pursue his entrepreneurial goals and an avenue to exert determination and reap personal satisfaction. These entrepreneurs did not inculcate additional green values and have not incorporated green goals into their recycling businesses.

Table 6.3 (p. 262-272) shows that there are instances where there may be no inculcation of green value orientation but green goals are incorporated in the recycling business (for example: Tavion, Phyfe). However, drawing on Tavion's emphasis on volunteers' and disadvantaged communities' benefits, it appears that green goals were in fact not part of his main goals. As for Phyfe, environmental benefits were a '*by-product*' – '*you are not going to do it if it's going to cost you a fortune...*' Phyfe emphasised enhancement of volume in his operations.

Even more interesting are those who inculcated an additional green value orientation following enactment (Daracha, Gilmore, Kyrk, Sima, Farlane, Carlton). As mentioned earlier, this adoption was unprompted. Nonetheless, greening was important to them as individuals and it added meaning to their enactment. They thus exerted efforts to incorporate greening. However, the driving force of enactment still remained with their initial value orientation. The bottom line was still the initial value perceived, i.e. to create that initial value. Green values were secondary. The following examples illustrate this point.

Carlton's major concern has been to provide a '*cradle-to-grave*' service by reprocessing all parts of a used tyre as it was at the end of its life for a number of different uses (including landfill engineering, which was

highlighted in his conversations). In Carlton's opinion, this has not been achieved by other tyre recyclers in United Kingdom. Thus, it represents a form of innovation.

Farlane successfully convinced the researcher that he was eager to address energy issues positively with his soon-to-be plant that will produce bio diesel from used cooking oil. Nonetheless, his desire to create an innovative edge was in part due to his distaste for the actions of others whom he labelled '*copyists and not entrepreneurial*', as well as his critique of society's lack of curiosity in knowledge accumulation. This suggests an overarching entrepreneurial value orientation over being green. He acknowledged that bio diesel '*fitted his bill*' in terms of developing an innovative edge and feeding his curiosities. Further, it was possible to have local sources for used cooking oil, mainly the offshore industry. This would allow him to build on the local market and achieve a competitive edge in his business. In a similar vein, Gilmore, Kyrk and Sima portrayed an overarching entrepreneurial value orientation which has driven their enactment.

Daracha was discerned as the entrepreneur with the strongest green value orientation amongst those who adopted it subsequent to enactment. With Daracha, one sees the expansion of RB19's recycling operations, development of 'comfy-sleep' (animal bedding made of shredded quality cardboard) and exertion of personal efforts to improve her knowledge and abilities in recycling issues, which she never had any interest in before. She also sought funding for plastic recycling. However, it was almost obvious that she was acting green (diversification of recycling operation) for the sake of funds (for economic reasons) which were intended to serve the ongoing concern of the business (creation of social values). Her efforts were inclined towards the interests of service users. Therefore, the initial value orientation was the driving force to overcome resource constraints during enactment. It remains true that entrepreneurship is an overtly economic activity (Anderson, 1995) but is sustained and anchored in the social context (Jack and Anderson, 2002). However, value orientation stands as the core driver of enactment. Daracha's economic rationalisation of the

situation drove her to forge new green ties directed towards sustaining the creation of social values.

6.5 Consequences of Enactment: Value Output

Value output is seen as an outcome of the preceding entrepreneurial events discussed. As in other forms of entrepreneurship, entrepreneurship in the recycling industry creates generic economic and social values too. It has been found that reclamation and recycling of waste materials provide a small revenue, substantial cost savings on waste material disposal costs and significantly benefit the environment (Barton, 1991).

This Section explores two core forms of value output specific to entrepreneurship in the recycling industry: first, the creation of the specific entrepreneur value underlying his or her pre-dominant value orientation; and secondly, the creation of green values regardless of the presence or absence of a green value orientation. These are expatiated in the following sub-sections and Figure 6.4 illustrates how value output fits into the entrepreneurial process.

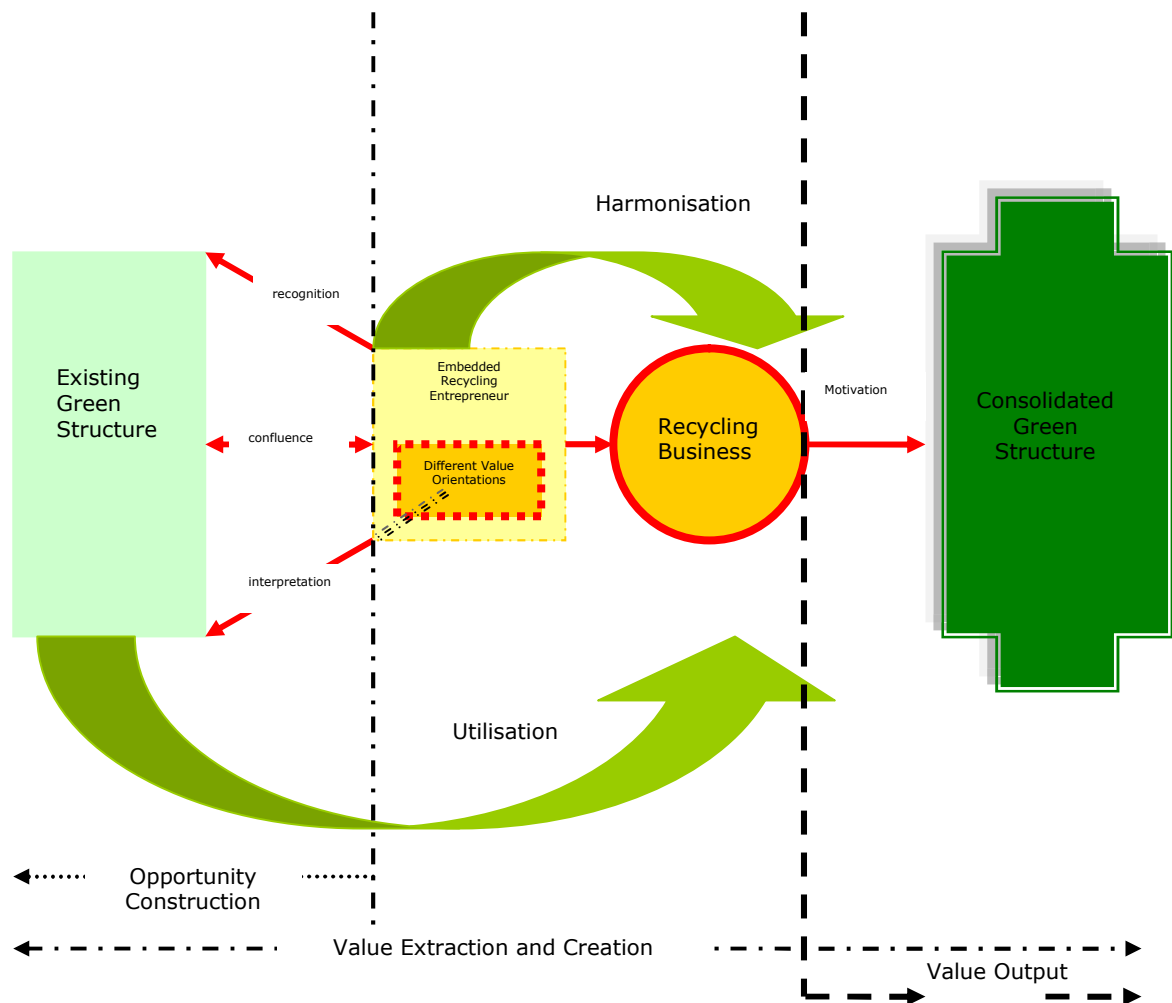


Figure 6.4: Consequences of Enactment: Value Output (Source: Author)

6.5.1 Entrepreneur-Specific Value Enhancement

Thus far, it has been emphasised that the entrepreneurs perceive the recycling opportunity based on a particular value and it is this orientation which underpins their opportunity construction and the underlying motive of the business formation. Accordingly, one of the outcomes of enactment is the creation of these specific values (see Table 6.3). In general, the entrepreneur with social, financial, green and entrepreneurial value orientations creates social, financial, green and entrepreneurial values respectively.

Anderson (2000a) discussed comprehensively the production of personal non-economic value which comprises satisfaction, fulfilment, gratification,

and delight in the excitement of enterprise. It is found here that the entrepreneurs' production of these forms of personal non-economic value resonates with their specific value orientation. For example, Sutherland's pride and passion – *'I would come in here on a Sunday morning and say it's all mine. This is what I've done. I feel proud...'* Other examples include Kamden, Daracha and Forbes's delight in the materialization of benefits to the service users. This point also illustrates the interaction of the entrepreneurs' cognitive and affective elements with structure i.e. those feelings of pride, joy and passion; and the enhanced belief of themselves to successfully carry on the business and to continuously create the value they recognised.

However, it is important to recognise that the green values created as an outcome of the entrepreneurial process appear to be overarching relative to the entrepreneur-specific value. This is elaborated in the next sub-section.

6.5.2 Overarching Green Value

A further feature in Table 6.2 is that the entrepreneurs 'acted green' in their entrepreneurial activities and this has resulted in a portrayal of green representation. All the entrepreneurs studied talked of similar impacts in terms of the manifestation of a green representation in the business and society. It is not necessarily that only those who developed green aspirations like Daracha, or genuinely set out to interweave innovative and technical interests to address energy issues like Farlane or Carlton, impacted on the greening of culture and structure. Those who unwaveringly stood by their initial value orientation which is not green also had a similar impact.

In Section 6.4.2, adaptation is seen as the enabler for enactment and the forging of ties to enable the utilisation of structure to exploit the opportunity so that the value perceived can be created. However, adaptation and ties are but mechanisms which fuel the value extraction and creation processes. For values to be created there must be an actual conduct of the doing. This means the carrying out of the recycling operations which involve different levels of reprocessing such as baling, segregating, sorting (plastic bottles,

aluminium cans), preparing the waste materials as feedstock for further reprocessing, shredding of waste materials (wood waste, tyres, paper and cardboard), refurbishing computers or lead pipe protectors, remanufacturing of wood waste into furniture, setting up the plant for reprocessing of cooking oil into bio fuel, refilling cartridges and toners. All these help to resolve businesses' costs related to landfill and contribute to the diversion from landfill. In most cases, the doing was encouraged and expanded due to the demand for the recycling services. Thus, the green structure becomes consolidated. The entrepreneurial events have added green values back to the existing green structure (Jack and Anderson, 2002).

Thus, the findings in this analysis uphold Giddens' Theory of Structuration (Giddens, 1984): the entrepreneur (agent) draws from what is available in the context (structure), has the freedom to pursue his or her value orientation with enactment (entrepreneurial agency in action) and in doing so gives back (entrepreneur-specific value and green value) to that structure; thus the duality of structure and agency. However, the green values created appear to be the overarching value created during the entrepreneurial process, not the entrepreneur-specific value. This is illustrated in Table 6.3 (p. 262-272) which shows that every entrepreneur in the study created green values together with their specific value.

Table 6.3: Enactment and Consequences

Entrepreneur	Value Orientation	Enactment		Value Output		Paradox	
		Business Representation	Value Extraction and Creation	Entrepreneur-Specific Value	Green Value	Entrepreneurs' Green Position	Bottom-line
Daracha	Social	Social	Balancing 50:50 between environmental and social goals. Developed supplier base for plastic sheets and quality cardboard to allow diversification of activities for business sustenance so that service users' work opportunity is sustained. Development of networks in order to increase supply and improve operations efficiency.	Maximised benefits for service users encompassing operations, team work and decision making.	Diversity recycling operations. Public education. Efforts to improve knowledge about recycling.	Started off with no interest. Absolutely no idea apart from its growing emphasis. Subsequent adoption of green values. Wants to contribute to future sustenance.	Social with green goals as secondary goals.
Forbes	Social	Social	Developed professional business relationships with the objective of creating a professional image for the business and trainees. Developed supplier base with large oil companies to ensure larger supply of aluminium cans and plastic bottles. Development of networks for collaborations in green competitions.	Trainees' prioritisation in all respects. Every opinion, decision, approach and action made with only one interest in mind: the trainees' benefits	Active participations in Green Awards and successful wins. Increased capacity.	No interest. Absolutely no idea apart from its growing emphasis. No change.	Social

Table 6.3: Enactment and Consequences (Continued)

Entrepreneur	Value Orientation	Enactment		Value Output		Paradox	
		Business Representation	Value Extraction and Creation	Entrepreneur-Specific Value	Green Value	Entrepreneurs' Green Position	Bottom-line
Kamden	Social	Social	Accommodating what is intuitively felt as a digression from the social nature of the business because of his capacity as General Manager. Expanded supply networks for wood waste to include smaller companies who had better quality wood so that the operations can be expanded to manufacturing of wood waste into a wide range of furniture	Trainees' prioritisation in all respects. Diligent and careful attendance to trainees' needs, counselling and safety.	Abided to Board's strategies in Green Awards and emphasis on wins. Diversification of end products from wood waste	No interest. Awareness. No change.	Social
Struan	Social	Social	Various advertising strategies via North Sound, and more effectively the Smart Car.	Committed to have customers leave with a smile having understood and experienced the savings they have made.	Adhered to participation in franchise's environmental initiatives.	No interest. Awareness. No change.	Social

Table 6.3: Enactment and Consequences (Continued)

Entrepreneur	Value Orientation	Enactment		Value Output		Paradox	
		Business Representation	Value Extraction and Creation	Entrepreneur-Specific Value	Green Value	Entrepreneurs' Green Position	Bottom-line
Tavion	Social	Social	Accommodating RB11's environmental goals based on principles of professional responsibility. Promoting status of social organisation through links with BEP-NE (to capture businesses' awareness so that the supply of used computers increase).	Volunteers' enjoyment and development of IT knowledge. Disadvantaged individuals and voluntary groups to access IT.	Promoting green especially in raising public awareness through seminars, general public and grant funding. RB11 as part of a solution to the existing problem of disposing computers in an environmental friendly manner. Solve businesses' problems of disposing computers.	No aspirations. Awareness. Supports environmental contributions. No change.	Social
Garry	Green	Green	Debates and negotiations with relevant members of Aberdeen City Council.	Management of Aberdeen City Council's waste collection. Plans to expand to commercial industrial collections. Development of landfill site.	Management of Aberdeen City Council's waste collection. Plans to expand to commercial industrial collections. Development of landfill site.	Known as tree-hugger since he was young. Wants to be an environmentalist. High green aspirations. Thinks that recycling is great but is not enough to stop land filling and global warming. Aspirations to diversify into incineration with the view that it will truly address the main problems related to global warming etc. No change.	Green

Table 6.3: Enactment and Consequences (Continued)

Entrepreneur	Value Orientation	Enactment		Value Output		Paradox	
		Business Representation	Value Extraction and Creation	Entrepreneur-Specific Value	Green Value	Entrepreneurs' Green Position	Bottom-line
Iver	Green	Green	Liaisons with integrated waste management companies for supply.	Ensure zero waste practice is upheld.	Ensure zero waste practice is upheld. The only wood recycling operation in Aberdeen City. Site is built with recycled wood.	Hates things going into landfill. Inspired to reduce wastage in the recycling business. No change.	Green
Beathas	Financial	Financial	Husband's networks with the offshore industry prior to being made redundant.	Constant monitoring that the financial returns must be worth while and well above the hard work exerted, otherwise a high likelihood that the business will be closed down.	Normal day-to-day operation as part of a going concern.	No aspirations. Personally feels that recycling does more harm to the environment.	Financial
Brody	Financial	Financial	Developed customer networks that would favour recycled protectors.	Decrease in the manufacture of virgin protectors in order to focus on the recycling division following massive profits. Ability to command a market price for recycled protectors.	Promotion and increased operations for recycling division. Diversification to granulate plastics.	Frequent observations of used protectors going into landfill added to his environmental awareness. Pride of contribution to landfill diversification. He felt a sense of satisfaction and pride in diversifying protectors from landfill. But he does not have green motives, green motivation or green value orientation.	Financial

Table 6.3: Enactment and Consequences (Continued)

Entrepreneur	Value Orientation	Enactment		Value Output		Paradox	
		Business Representation	Value Extraction and Creation	Entrepreneur-Specific Value	Green Value	Entrepreneurs' Green Position	Bottom-line
Gilmat	Financial	Financial	Used the recycling business as a disposal avenue for construction wastes generated by existing construction business.	A cost savings avenue for existing construction business.	Reduction of construction waste from existing construction business from going into landfill.	Highly aware of environmental issues. Interestingly, he does not perceive his recycling operations as contributing to environmental improvement. Plans to diversify his recycling business into incineration which he thinks would make a difference to environmental protection.	Financial
Jock	Financial	Financial	Won the contract with Moray Council for the collection and transfer of waste.	Willingness and considerations to decrease his vehicle servicing business to make room for recycling operations which are generating good income.	Increased contracts with Moray and Highland Councils. Market research on glass recycling for potential set-up of glass recycling business. If this materialises it will be the first in Scotland. Potential increase in recycling operations.	No aspirations. Views the transfer of household waste operations as part of the haulage business rather than a recycling business. No change.	Financial

Table 6.3: Enactment and Consequences (Continued)

Entrepreneur	Value Orientation	Enactment		Value Output		Paradox	
		Business Representation	Value Extraction and Creation	Entrepreneur-Specific Value	Green Value	Entrepreneurs' Green Position	Bottom-line
Ramsey	Financial	Financial	Necessary because recycling is all over the world. A solution to the existing problem of employer who had the ready supply of used protectors. Collaborated with colleague who could assist in the financing of the business.	Additional income but was not aggressively pursuing financial goals.	Pro-green as a marketing strategy.	No aspirations. Awareness.	Entrepreneurial
Renaldie	Financial	Financial	Various advertising strategies via North Sound and more effective the Smart Car. Networking and marketing strategies with financial motives. Utilised wife's involvement in Business Network Association to increase consumer awareness of their services.	Satisfying income which is a prime motivator to renew the franchise.	Adhered to participation in franchise's environmental initiatives.	No interest. Awareness. No change.	Financial.

Table 6.3: Enactment and Consequences (Continued)

Entrepreneur	Value Orientation	Enactment		Value Output		Paradox	
		Business Representation	Value Extraction and Creation	Entrepreneur-Specific Value	Green Value	Entrepreneurs' Green Position	Bottom-line
Bean	Entrepreneurial	Entrepreneurial	Constantly developing business networks for supplies and business strategies.	Continuously strives for higher achievement associated with business growth, financial returns and employee satisfaction.	Growth, development and expansion of recycling operations throughout the world.	Awareness of environmental issues. No indication of green interest in him or as part of the recycling business. Sees himself as part of metal industry and recycling business operations as metal operations. No change.	Entrepreneurial, high level of pride associated with financial returns.
Carlton	Entrepreneurial	Entrepreneurial	Collaborations with various parties on environmentally friendly projects with tyre chips.	Materialisation of desire to have environmental uses for tyre chips, rather than merely as granules for horse arenas and playgrounds.	Diversification of recycling operations from end-of-life-vehicles to massive tyre recycling. The use of tyre chips in landfill engineering.	Green values from landfill engineering background but was not associated to the recycling business. Subsequent adoption of green value orientation and green aspirations.	Entrepreneurial, with green goals to increase uses for recycled tyres.
Farlane	Entrepreneurial	Entrepreneurial	Liaisons with potential suppliers of used cooking oil for example, restaurants and the offshore industry. Liaisons with Aberdeenshire Council in developing his strategies for the recycling of used cooking oil.	Expansion of recycling activities to incorporate an innovative recycling operation.	Solution for large manufacturers of soap powder to dispose of their end materials. Venture into production of bio fuel. Technical knowledge and curiosity channelled to help resolve energy issues.	Highly aware of environmental issues, particularly energy issues. Concern about the issues and disenchanted with the lack of emphasis in the education system to resolve these issues. Subsequent adoption of green values, green value	Entrepreneurial, with green goals to feed his innovative hunger whilst contributing to society.

Table 6.3: Enactment and Consequences (Continued)

Entrepreneur	Value Orientation	Enactment		Value Output		Paradox	
		Business Representation	Value Extraction and Creation	Entrepreneur-Specific Value	Green Value	Entrepreneurs' Green Position	Bottom-line
Farlane (continued)						orientation and green aspirations.	
Gilmore	Entrepreneurial	Entrepreneurial	Developed networks with the Councils and won contracts for their green wastes. Attends recycling and environmental programmes organised by BEP-NE and WRAP to gather more knowledge of the field.	The only composting site in North East Scotland. Satisfaction and fulfilment in relation to growth of plant and expansion of business.	Provide a solution for Councils' disposal of green waste problems. Growth in composting activities and plans for further expansion. Increasing contracts with 5 Local Councils. Accreditation by PAS100.	No interest, idea or aspirations. Aware of the associated problems. Subsequent adoption of green value orientation, green goals and aspirations: Sees his role as a provider of green waste solution to help diversification from landfill in an environmental friendly manner.	Entrepreneurial, with green goals giving an additional purpose
Henderson	Entrepreneurial	Entrepreneurial	Accommodated main customers' demand to recycle wood.	Sole wood reprocessing site and two subsidiary sites give a sense of fulfilment and personal satisfaction. Continuous strive for higher achievement.	Runs the wood recycling operation in Stirling which takes in all the intermediately reprocessed wood chips from other recycling operations in the NES and other parts of Scotland.	Awareness and interest in environmental issues but does not appear to be associated with the recycling business. Adoption of green values but does not relate it to recycling business. Emphasised desire to venture into incineration	Entrepreneurial

Table 6.3: Enactment and Consequences (Continued)

Entrepreneur	Value Orientation	Enactment		Value Output		Paradox	
		Business Representation	Value Extraction and Creation	Entrepreneur-Specific Value	Green Value	Entrepreneurs' Green Position	Bottom-line
Jamie	Entrepreneurial	Entrepreneurial	Constantly developing networks from various sources, for example previous business and other existing businesses.	Continuously looking for opportunities to diversify: media, exhibitions, associations. Expanding scope of creativity in the recycling operations.	Developed the business of selling waste equipment into recycling operation. Plans for expanding and diversifying into a massive paper and cardboard recycling operation.	Has an awareness of environmental issues but gave no indication of green interest in him or as part of the recycling business. 'if you can save the planet at the same time great' No change.	Entrepreneurial, high emphasis on the criticality and practicality of sufficient financial returns.
Kyrk	Entrepreneurial	Entrepreneurial	Face-to-face communications with customers and potential customers to foster better relationships.	Achieve and maintain high levels of operations in the first months of the business's operations.	Consistently expanding operations. Aspire to conduct public education and awareness in skip hire and recycling matters.	Awareness of increasing emphasis. Subsequent adoption of green values. Sees the business's role as an important contribution to the environment and an opportunity to spread knowledge of recycling to contribute.	Entrepreneurial, with aspiring green goals.

Table 6.3: Enactment and Consequences (Continued)

Entrepreneur	Value Orientation	Enactment		Value Output		Paradox	
		Business Representation	Value Extraction and Creation	Entrepreneur-Specific Value	Green Value	Entrepreneurs' Green Position	Bottom-line
Phyfe	Entrepreneurial	Entrepreneurial	Liaisons with the offshore industry for supply.	Constant efforts to benchmark level of success with the volume. Constantly seeking improved ways of running the recycling operations.	Uphold environmental contribution by maximising all that can be taken out of the skip hire system.	Supports green practices but holds the principle that in business environmental goals have to be something 'on-the-way'. No change.	Entrepreneurial
Sima	Entrepreneurial	Entrepreneurial	Face-to-face communications with customers and potential customers to foster better relationships.	Achieve and maintain high levels of operations in the first months of the business's operations.	Consistently expanding operations. Aspire to encompass public education and awareness in skip hire and recycling matters.	Awareness of increasing emphasis. Subsequent adoption of green values. Sees the business's role as an important contribution to the environment and opportunity to spread knowledge of recycling.	Entrepreneurial
Skene	Entrepreneurial	Entrepreneurial	Liaisons with integrated waste management companies for supply.	Fulfilment in the maintenance of the business despite the constant threads pertaining to premises which obstructed business growth.	The only wood recycling operation in Aberdeen City. Site is built with recycled wood.	A household recycler. Recycling business does not appear to be associated with green values. No change.	Entrepreneurial, finds a social purpose to provide a source of income for youngsters.

Table 6.3: Enactment and Consequences (Continued)

Entrepreneur	Value Orientation	Enactment		Value Output		Paradox	
		Business Representation	Value Extraction and Creation	Entrepreneur-Specific Value	Green Value	Entrepreneurs' Green Position	Bottom-line
Sutherland	Entrepreneurial	Entrepreneurial	Face-to-face communications with customers and potential customers to foster better relationships.	Determined to attain his highest potential, in principle and in practice. Satisfaction and fulfilment in relation to growth of plant and expansion of business.	Expansion and diversification of skip hire and recycling operations. Up to 80% of wood recycling.	No interest and aspirations. Aware of its growing interest and concern. No change.	Entrepreneurial
Beiste	Financial Entrepreneurial Social	Financial Entrepreneurial Social	Accommodating business strategies into recycling context to increase revenues. Developing a wide range of customers from home users to SMEs and large companies.	Expansion into printing related activities in order to increase revenues. Extension of one-to-one customer service for benefit of customer.	Adhered to participation in franchise's environmental initiatives.	No aspirations. Awareness. No change.	Financial

End of Table 6.3

6.6 The Paradox

The findings of this study have been counter to the researcher's expectations about the recycling industry, recycling business and recycling entrepreneur. During the fieldwork, the researcher was taken by surprised when the informants appeared to suggest their lack of interest regarding greening. Her pre-fieldwork expectations were that recycling entrepreneurs would be a group of nature lovers, inspired to promote and contribute to environmental sustainability via their recycling businesses. In response, the researcher took efforts to ensure that this was not an invalid or biased interpretation on the researcher's part. Questions such as, '*What is it you find interesting in recycling?*' received Forbes's immediate enthusiastic reply directed to the clients' enjoyment and desire to be involved in the job, as well as their contribution to the development of RB18. At another instance, the researcher asked: '*How about your personal idea about recycling?*' His response centred on the contradiction between the general encouragement given to them by the Government and the Scottish Environment Protection Agency's tight regulations. Throughout the discussion on the two topics, the greening idea or green concerns were never in sight. In contrast, Forbes has got RB18 actively involved in green competitions. As a result, RB18 has won a few awards and is aiming to win more awards. But then again, the motivation behind these decisions was obviously emphasised as the boosting of clients' self-esteem and pride following their participation in and winning of these competitions.

A similar experience occurred with Tavion and Kamden. Tavion joined RB11 as Project Manager because it involved voluntary work and made use of his technical knowledge about computers. RB11's objectives however include the achievement of social and environmental values, but throughout the interview, when Tavion spoke about environmental objectives, it was merely in reference to his professional responsibility as Project Manager in RB11. Kamden hardly gave the researcher any opportunity to probe into his greening stance. His main concern was the business being a social enterprise for people with learning difficulties and physical disabilities. His interest focused on the expansion to suit these objectives and encompass activities such as horticulture, rather than recycling operations as a

contribution to environmental sustainability. However, like Forbes, a lot of emphasis was placed on the participation in Green Awards. Similar checks were also extended to other informants who have been categorised as having a social, financial or green value orientation. The indication was that they portrayed a similar lack of interest as Forbes, Tavion and Kamden.

Perhaps more importantly, is the overarching green value output relative to the entrepreneur-specific value following enactment. Only two of the entrepreneurs in this study possessed a green value orientation. Yet, it is the green representations of the recycling industry, business and entrepreneur that brought about the increasing emphasis and transformative processes in the value frames about them. Perhaps, what makes this more interesting is not only that the entrepreneurs do not possess a green value orientation but they do not even possess any green interests or concerns. They may or may not have any idea about it. Some entrepreneurs learnt about the importance of greening along the way and some made changes to adopt it. Others maintained their disinterested stance. Nevertheless, whether or not the entrepreneurs set out with green value orientation, their actions are green and thus they contribute to both actual greening (diversion from landfill) and greening of the structure of the socio-political context.

6.6 Summary and Conclusion

This Chapter has explored the nature of agency by analysing the entrepreneurial process. The analysis is guided by a sub-research question: how are values recognised and enacted during interactive processes? The focus thus is on the interactive process between the entrepreneur and the context, and the consequences of enactment. A chronological flow is assumed to capture the temporal changes from the point which the entrepreneurial agency is founded to the point of value outputs in one cycle. The different stages of analysis, outcomes and highlights at each stage are summarised in Table 6.4.

Stages of Analysis	Key Outcome of Analysis	Highlights
Foundations of Entrepreneurial Agency	Value Orientation	Configured by a set of aspirations, ambitions and values which are cognitively, affectively, relationally and structurally embedded
Opportunity Construction	Confluence	Collision of values
	Recognition Interpretation	Underpinned by value orientation
Enactment	Harmonisation	Re-balancing of operations
	Utilisation	Exploiting the opportunity via green ties
	Motivation	Driven by initial (pre-dominant) value orientation
Consequences of Enactment	Structuration	Paradoxically overarching green value

Table 6.4: Summary of Analysis at the Process-level

The analysis in this Chapter demonstrates that entrepreneurship in the recycling industry is a process by which the recycling entrepreneurs' actions are contextually embedded through interactive processes and gives rise to outcomes (Chell, 2000). It also shows that the interactive process occurs at different phases of the entrepreneurship phenomenon. More importantly, the analysis shows that value orientation is the driver of this phenomenon, moving along in a continuum over time, directing entrepreneurial behaviour, motivation, decision and action, and giving meaning to the entrepreneurial process.

However, the preceding discussions in this Chapter have brought three points to attention. Firstly, there are only two of the entrepreneurs in the study who possess a green value orientation at the start of their recycling businesses (Chapter 5). Secondly, the collision of entrepreneurs' individual values and society's green values necessitates harmonisation in order to utilise the structure to create their values. Thirdly, green values are the

overarching green values created despite the entrepreneurs-specific value being the predominant value, driving enactment. In other words, the green structure becomes consolidated. The question thus arises: how can we use these understandings generated about the entrepreneurial process to explain this paradox? The next Chapter applies a social construction framework to the three levels of analysis conducted in Chapters 4, 5 and 6 to provide an entrepreneurial theorising of the recycling industry.

CHAPTER 7

AN ENTREPRENEURIAL THEORISING OF THE RECYCLING INDUSTRY

7.1 Introduction

At the agent level analysis, Chapter 5 has derived a typology for recycling entrepreneurs based on their value orientations. Whilst the context in which the recycling industry operates in is a green structure (Chapter 4), it was found that only two of the recycling entrepreneurs interviewed belong to the green value orientation category. Perhaps even more contradictory is that the entrepreneurial process generated overarching green values in the context as opposed to entrepreneurial, financial or social values (Chapter 6). Whereas Chapter 6 has also demonstrated that the entrepreneurs' adaptation processes and transformation takes place through the adoption of green values, it was clear that the initial value orientation remains the pre-dominant driver of enactment. Yet, recycling, whether it refers to the practice, industry, business or entrepreneur, is increasingly portrayed as concerned with green values.

The purpose of this Chapter is to understand the manifestation of an apparent overarching green emphasis, culture and value in the recycling industry which may be seen as the resultant from one or more forces not necessarily related to environmentalism. Section 7.2 presents the three different phases of social constructions; the second being the renewed social constructions of the first and the third being the renewed social constructions of the second. Section 7.3 concludes with an entrepreneurial theorising of the recycling industry.

7.2 Greening the Structure, Socially Constructing Realities

The green behaviour and actions of entrepreneurs as well as the green activities of the businesses manifest into the structure. Although no individual green values were adopted, enactment still gave the recycling business a green representation; hence the entrepreneurs' contribution to the greening of culture and structure. In other words, regardless of the absence of green value orientation, greening was manifested into the structure. It appears then that enactment, regardless of the type of value

orientation, contributed to the consolidation of the green structure. Further, it also appears that enactment, regardless of whether or not the entrepreneur experienced the adoption of green values and/or goals, added to the consolidation of the green structure. For both parts, the consequences of enactment i.e. its contribution to the consolidation, reproduction and transformation of an enacted consolidated green structure appears similar.

Yet, what are the implications of all these on the transformative processes that have taken (and is still taking) place for the recycling industry? How did the shift of value frames from a low value perception to a high value perception of the recycling industry take place? How do our understandings of environmental heroes (or at least people who are passionate about the environment and are committed to do their part), the engagement of the middle class and emphasis on innovation and creativity come to be part of the recycling industry? In this study, this phenomenon is understood in terms of social constructions and the outcomes of social constructions i.e. the individual entrepreneur's or society's versions of reality in his, hers or their relations with their entire social context (Fletcher, 2006).

In a nutshell, the transformative processes are reflections of the coming together of different social constructions which result in renewed social constructions in a dynamic and circular relationship between structure and agency. The ensuing discussions in this Section will elaborate on this and Figure 6.3 is used to assist in this understanding.

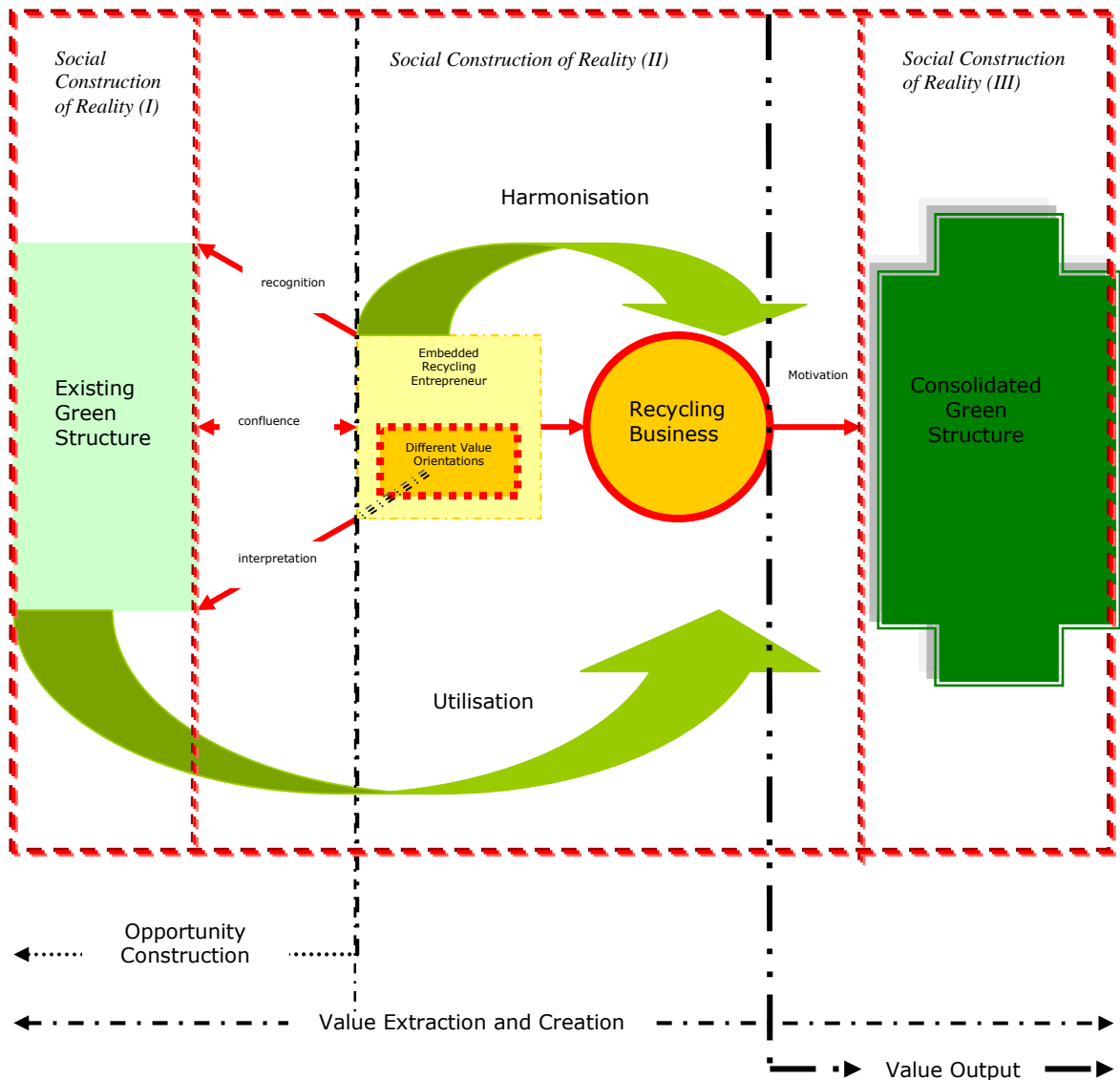


Figure 7.1: Greening the Structure, Socially Constructing Realities (Source: Author)

7.2.1 Social Construction of Reality (I)

Social demands arising from environmental concerns caused political responses which gave rise to socio-economic impacts on recycling as evidenced in landfill penalties and a growing green culture which increasingly regards waste as a resource, and recycling as an environmentally friendly and favourable practice; as well as increased value perception for the recycling industry, business and entrepreneur (Chapter 4). These components interplay, pervade, articulate and manifest in a spatial dimension i.e. a structure embodying society's green values. Thus,

we see society's version of that context imbued with an objective nature of 'green'. That appears to be society's shared understanding infused by shared actions via the promotion and practices of recycling.

7.2.2 Social Construction of Reality (II)

The recycling entrepreneur who is contextually embedded in this green structure recognises the opportunities therein by virtue of his or her position in the context which was conducive to the development and reinforcement of ties. On the one hand, the recycling business opportunities may be argued to be social constructions. In other words, the entrepreneurs constructed the identification, articulation and evaluation of ideas as recycling business opportunities (Chell, 2000). The non-entrepreneur does not construe it as such, nor does the generic society whose shared understanding of the structural situation remains at the level of an objective nature of the 'green'. On the other hand, the recycling entrepreneurs come from unique backgrounds and experiences which configure their aspirations, beliefs and values which in turn configure their value perception of the structural situation i.e. as an opportunity to do social good, environmental good, make money or entrepreneur. That is to say, they construe the recycling business opportunity in different ways following these configurations. Being contextually embedded, they come to know themselves and the structure through the externalisation of consciousness to know themselves (Chell, 2000). The opportunity to do social good is the recycling entrepreneur with social value orientation's reality of the structural situation. Thus, that way in which he or she has perceived it opportunistically is also socially constructed as if it forms that part of the mental space between the recycling entrepreneur and his or her perception of reality (Chell, 2000).

Social constructions are subjective. Amongst the entrepreneurs in this study, this can be seen from the different value orientations, different interpretations of the structure or the different realities which they possess. We see a version of reality attached to a shared understanding of 'green' and that of different versions of reality which the entrepreneurs possess. However, each of the entrepreneurs has interpreted the structural situations

to recognise his or her own values (Anderson, 2000) so as to make sense of it (Weick, 1995) and to render the subjective into something more tangible (Chell, 2000) through the enactment of the structure (Anderson, 2000 refers as enactment of the environment) by forming a business representation of his or her reality.

Therefore, recycling businesses are the imaginative creation of the entrepreneurs' subjective interpretation of the social construction of the reality of the structural situations. Its purpose is to manage the meaning and create their reality of the structural situation, which is essentially underpinned by their value perceptions. In that sense, the social construction of their reality also includes the construction of time and space (Chell, 2000). Their value perceptions of the recycling business opportunity create mental representations of the business. For example, Farlane envisions an innovative move for his recycling business with the idea of recycling cooking oil. This idea is developed through discussions with staff and management of Aberdeenshire Council, offshore companies and restaurants. He also constructed a new plant for that purpose.

Thus far, it has been said that reality is subjective and accordingly, the entrepreneur's reality may not be shared. But Chell (2000) posits that '*an entrepreneurial act is an attempt to respond to, and thereby change, a set of circumstances (perceived in a positive or negative light) with a view to creating desired outcome*' (p.71). The recycling entrepreneurs' responses are seen in the value extraction processes of harmonisation and utilisation so that they may create their realities.

In those processes, meanings are negotiated and shared. The initial phase of adaptation (accept-as-it-is) expresses the entrepreneurs' willingness to negotiate and perhaps compromise the meaning of their enactment as a pre-requisite for the creation of their realities. The later phase of adaptation (minded behaviour) expresses 'green' related behaviour, decisions or actions. On the other hand, genuine adoption of a green value orientation added meaning to their enactment expressed through purposeful, directed and intentional 'green' related behaviours, decisions and actions. Forging

ties were essentially the forging of 'green' ties. These were ties developed with parties practicing, keen to be practicing or potentially practicing 'green'. To an extent, the development of these ties was the entrepreneurs' adaptation to assist in meeting the needs of these parties which were along the lines of environmentally friendly solutions for waste disposal, landfill diversion and the enhancement of the triple bottom line.

The entrepreneur is an active agent who shapes and creates his or her own reality, operating within a reality which sets limits on the choice of action possibilities (Chell, 2000). In this case, limitations may be seen as the need to harmonise and embed (Jack and Anderson, 2002) into the green structure via negotiated and shared meanings. Perhaps the most interesting example is Forbes's efforts, commitment and dedication to participate in, and win Green Awards. As the earlier parts of this Chapter have mentioned, Forbes had no concern for environmental issues. His interest was the provision of opportunities and room for growth for his clients. Another example is Tavion. Tavion's involvement in Breakfast talks via BEP-NE was aimed at the promotion of RB11 as a social and environmental enterprise. There, Tavion emphasised RB11's role in providing a business solution for the existing environmental problem of disposing computers in an environmentally friendly manner. But both Forbes and Tavion heeded what they were doing. They were drawing from what was available in the structural situation to realise the vision of their reality i.e. the creation of social value. Thus, although confined within the green structure the entrepreneurs were energised by their entrepreneurial intentions, guided by a strategic frame or vision of instrumentally motivated action to discern between situations that can be developed opportunistically to create their reality and those that cannot (Chell, 2000). Their entrepreneurial experience involves the management and articulation of meaning (Anderson, 2000). The businesses acted out the entrepreneurs' version of the social construction of the structural situation, made real through negotiating and sharing meanings for the sake of a purposive enactment to harvest the value underlying their perception of reality. The resulting effect however, is not limited to the purposive enactment and creation of their reality. There is also an unintended consolidation of the green structure and

culture, as well as an unintended outcome of a green image portrayed to society. It may be argued that this consolidated green structure is the result of the coming together of two social constructions of realities put together via negotiated and shared meanings to articulate the meaning of enactment for the entrepreneur so that his or her reality may be created.

7.2.3 Social Construction of Reality (III)

Thus far, it has been said that meaning articulates itself through the entrepreneurs' 'green' related behaviours, decisions and actions, whether through adoption or adaptation. That is to say all the entrepreneurs in the study have a shared action via the doing. On the other hand, the doing is also exhibited in the expansion of recycling operations evidenced by the size of operation premises and the increase in waste equipment and machinery that was a commonality amongst all the entrepreneurs in the study. No single entrepreneur retained their operations in the exactly same premises. They shifted to bigger premises or expanded the size of their original premises because of the expansion and development of their businesses.

Sutherland, despite his complaints about the burden of environmental legislation that he had to abide by, and his dissatisfaction with the Government, his operations expanded from a skip hire company into a waste disposal and recycling operation. At the time of the interview, he was aspiring to refine the system, purchase a new plant and enhance volume.

Jamie, who operated similar recycling activities to Brody but on a smaller scale was about to begin a massive paper recycling operation. He had purchased the recently closed site of Paper Gone Paper Board, the single paper and cardboard re-processor in Aberdeen since the collapse of Donside Paper Mills in 2002, and potentially replace Paper Gone Paperboard's role in the region.

There was also Jock who had recently won a five-year contract with Highland Council and potential to venture into the reprocessing of green

glass which would make it the single glass re-processor in the North East of Scotland; a role similar to that played by Gilmore and Henderson.

For Forbes, the researcher noted an increase in the capacity of aluminium cans and plastic bottles over the years, the lack of space on his premises and the development of his supplier base from pubs, clubs and schools to large oil companies. Kamden's supplier base has also been developed from joiners to waste management companies and a mix of smaller companies for better quality wood. RB11 under the leadership of Tavion has expanded from a mere one unit to six unit premises which evidenced the increased capacity and volume of computers refurbished by the business.

This is also true even if the entrepreneur appeared to be de-motivated (Beathas, Skene) or carefree (Ramsey). Beathas did not seem happy with the revenues that the business was generating and considered closing down the business. Ramsey was the most carefree of all the entrepreneurs in the study. From an original motive to generate additional income, the business became an enjoyable pastime and hobby. As for Skene, it appeared that room to manoeuvre strategies over the past eight years were obstructed by threats that the premises needed to be demolished for the development of a railway line. Nonetheless, all three spoke about the expansion and enhancement of their operations, growth in volume, premises, vehicles and plants.

There are other forms of shared actions undertaken by the entrepreneurs too. For example, the 'plant-a-tree' campaign initiated by Cartridge World and carried out by Struan and Renaldie. Struan's main motivation and commitment for the job was to serve the public so that they would not be '*continuously conned*'. To be employed as part of the Cartridge World franchise meant that he was obliged to carry out various environmental campaigns. In the same way too, Renaldie and Beiste have to oblige the franchises' environmental initiatives if they want to carry on the franchise.

Whilst these acts are not necessarily intentionally green, the physical manifestations of these acts of doing constructed 'green spaces' within the

structure. Whilst these physical manifestations are not deterministic (Anderson, 2000), much of our lives are regulated by the external specification of roles and their associated activity and rules of behaviour (Chell, 2000). The observation of these actions may have created mental manifestations which gave a sense of objectivity and attributed to it an objective nature with a common language (green) attached to recycling. Whether or not the behaviour and action arise from adaptation or adoption of green values, society makes attributions to the basis of the behaviour they perceive (Chell, 2000). Consequently, it consolidates a shared understanding of this reality and results in a consolidated green structure. The social construction i.e. the consolidated version of the reality (green) is formed through action, attention and interpretation (Johannisson, 1988). The entrepreneurs have externalised the truth (green) and made it a reality in terms of their behaviour in the articulation of meaning (their reality) and in doing so, they have consolidated the truth (green).

7.3 An Entrepreneurial Theorising of the Recycling Industry

Following the above, perhaps we have arrived at a fundamental argument to explain the transformative processes that have taken, and are still taking place, in the recycling industry. That is to say, the increasing emphasis on the recycling industry is a subjective social construction of reality, given an objective nature attached to the language of 'green' intensified by the entrepreneurs' articulation of their reality. The illustrations that follow further strengthen this argument.

Gilmat provides a very interesting example of how the reality (green) has been constructed. It was Phyfe who introduced him to the researcher as an example of a business which actually reprocessed waste materials into an end product that could be used. It is worth noting that there was no friendship between Gilmat and Phyfe. The researcher learnt this during her interview with Gilmat following his claim that he refused to develop any form of relationship with anyone and his business was purely a '*one-man-show*'; only the bank was needed. It was simply that Phyfe recognised Gilmat as one of the re-processors of construction waste into aggregates, a unique recycling business and thus worthy of a visit. Conversely, it turned

out that Gilmat's recycling operations were limited to the reprocessing of construction waste from his quarrying business to avoid landfill cost. That was his only source of supply and he made no effort to expand further. Gilmat appeared to have a level of environmental aspiration. However, his idea of recycling was mixed with the concept of incineration. He had plans to grow the recycling division via incineration. Whatever the situation, it was evident that he and his business were perceived differently in society, and within the industry itself, but not by Gilmat himself.

Kamden is another example. Skene, the first wood recycler interviewed described his own recycling operation as a small operation and '*...I would suggest you to visit RB8...Kamden Godwin, that's the guy. His is a proper big recycling business.*' The researcher's encounter with Kamden suggested otherwise. Kamden firmly clarified the social status of RB8 during the first conversation when the researcher called to arrange for an interview and site visit. This carried on throughout the first hour of the interview. Kamden's responses were a reflection of his social construction of reality. The interesting point in this encounter is that the researcher contacted Kamden with language 'green' objectified in her mental representation i.e. her social construction of reality. Furthermore, a closer look at the data at a later stage suggested that Skene had in mind the idea of a big commercial business i.e. in line with his reality which is underpinned by an entrepreneurial value orientation.

Additionally, many have cited Big Business as the largest metal recycler in the region. On the other hand, Bean, the owner of Big Business did not refer to his business being a part of the recycling industry. Instead, he considers it to be part of the metal industry. Further, his interests and passion appeared to be mainly related to the metal industry's activities, demands and benefits. Hence, a contradiction to what appears as reality to others.

Following the above illustrations, it seems that when one does not have actual contact with the specific recycling entrepreneur, there is a tendency to assume an understanding based on social realities. For example, Guy

Robertson the then Senior Environmental Advisor for BEP-NE has given a more 'accurate' version of reality. In the early discussions prior to fieldwork, he stated '*.....not environmental, they're all entrepreneurial...*' His recommendation for the researcher to interview Gilmore on the basis that Gilmore's was a truly entrepreneurial venture implies that he knows the difference between social realities and the entrepreneurs' realities. Guy's reality of the structure has been socially constructed by his work experience that has exposed him to the realities of the recycling entrepreneurs. To an extent, this is similar to the researcher's experience. Prior to conducting the fieldwork for the study and interacting with the recycling entrepreneurs, her version of reality was imbued by the language of 'green'. This aligns with Parkinson and Howorth's (2008) argument that '*resonances of the enterprise discourse are not only appropriated but assimilated under other discourses.*'

Consequently, the recycling industry may be understood as a social construction, a representation of shared understanding of a subjective reality given an objective nature through the language of 'green'. To this end, it coincides with Chell's (2000, p. 68) stance:

It is subjective in so far as the individual in the situation deals with it according to their perception and interpretation of its elements, and their creation and construction of what it means to them and could or should mean to others. It is objective in so far as people use a common language to interpret and convey the meaning of situations; they use "evidence" in support of the particular interpretation, which then becomes the accepted or dominant interpretation i.e. the reality...

In this instance, the dominant interpretation is represented in the language of 'green'.

CHAPTER 8

CONCLUSIONS

8.1 Introduction

The research interest for this study began with a general observation of the lack of theory-practice integration between the academic contexts of recycling and entrepreneurship with the growth of interest in the recycling industry. The research thus began by asking, 'how well does entrepreneurship explain the recycling industry?' In order to develop insights into this question, the researcher opted to study entrepreneurship as a process with a focus on the recycling entrepreneur's entrepreneurial experiences. Qualitative inquiry was used during fieldwork and to analyse and understand the context, the entrepreneurs' perspective and the interactive processes between them during the entrepreneurial journey. Consequently, the preceding Chapter 7 describes the recycling industry as a socially constructed phenomenon and the role of the recycling entrepreneurs in its construction and reconstruction.

The purpose of this Chapter is to present conclusions for this study. It highlights the key findings, contributions and implications of this research. The next Section 8.2 re-visits the main research question, 'how well does entrepreneurship explain the recycling industry?' A diagrammatic representation of the key research phases undertaken to generate insights into this question is provided. Furthermore, the key findings from Chapters 4, 5 and 6 are summarised to show the understandings and insights generated from the sub-research questions. The highlight of this Section is a final re-visit to the main research question which emphasises the point that this research has demonstrated that entrepreneurship can explain the recycling industry. This is followed by Sections 8.3, 8.4 and 8.5 which address the 'so what' (Figure 1.1) of the preceding. In Section 8.3, the original theoretical contribution of this research is presented. This contribution is grounded in the analysis trajectory which resulted in two innovative analytical frameworks being developed to understand the entrepreneurial process in the recycling industry, and to theorise the recycling industry phenomenon. Each of these frameworks stands as an

individual theoretical contribution and together they also frame a unique combination of theorising the social construction lens in entrepreneurship studies. Thereafter, the contributions of these frameworks to the development of entrepreneurship research are presented. This Section highlights the use of value orientation as the unit of analysis and the dynamic nature of the framework leading to a proposed model of entrepreneurship in the recycling industry, and the explanation of the industry phenomenon. The latter part of the Section presents the contribution of this research in terms of developments to the academic fields of entrepreneurship and recycling. Section 8.4 outlines the theoretical implications of this research. Here, attention is drawn to the approach undertaken from the start of the study to the final stage of entrepreneurial theorising of the recycling industry. It demonstrates that this approach(es) provides a solid basis for the collection of rich and thick empirical data which grounded the new theoretical and empirical insights elaborated in Section 8.3. Section 8.5 discusses the implications for policy and practice. Section 8.6 makes some suggestions for further research.

8.2 Re-visiting 'How Well Does Entrepreneurship Explain the Recycling Industry?'

Following the research focus which emanated from the growing interest and popularity of the recycling industry, recycling businesses and recycling entrepreneurs, a review of the policy context was conducted. This provided a background for the study. The key finding was that the UK waste management policy context provides socio-cultural and socio-economic implications which are conducive to different forms of entrepreneurial opportunities. Thus, the main research question arose: how well does entrepreneurship explain the recycling industry?

A review of the literatures in recycling and entrepreneurship (Chapter 2) has revealed that the existing theoretical knowledge in each field is unable to generate reliable insights into this question. Nonetheless, the review has helped to narrow the focus on the recycling entrepreneurs' entrepreneurial experiences and streamline the approach on entrepreneurship as a process. The research question has thus been unpacked and refined to guide the

development of insights at the context, entrepreneur and process levels (see Figure 8.1). The sub-research questions at these three levels guided the fieldwork and data analysis. The findings were then analysed using a social construction framework which generated a fundamental understanding of the recycling industry and its transformative processes from an entrepreneurship perspective. They also enriched the study with empirical insights in a manner and depth which had been lacking in prior studies in the entrepreneurship and recycling fields.

Figure 8.1 summarises the key research phases undertaken to develop insights into the question 'how well does entrepreneurship explain the recycling industry?' It illustrates a circular process involving a reasonably unilluminated question guiding the literature review but also simultaneously refining research questions at the context, entrepreneur and process levels. This is followed by Sections 8.2.1, 8.2.2 and 8.2.3 which summarise the key insights and understandings generated from the sub-research questions at the context, entrepreneur and process levels. Section 8.2.4 closes this Section with a description of the recycling industry from the entrepreneurship perspective, extracted from Chapter 7.

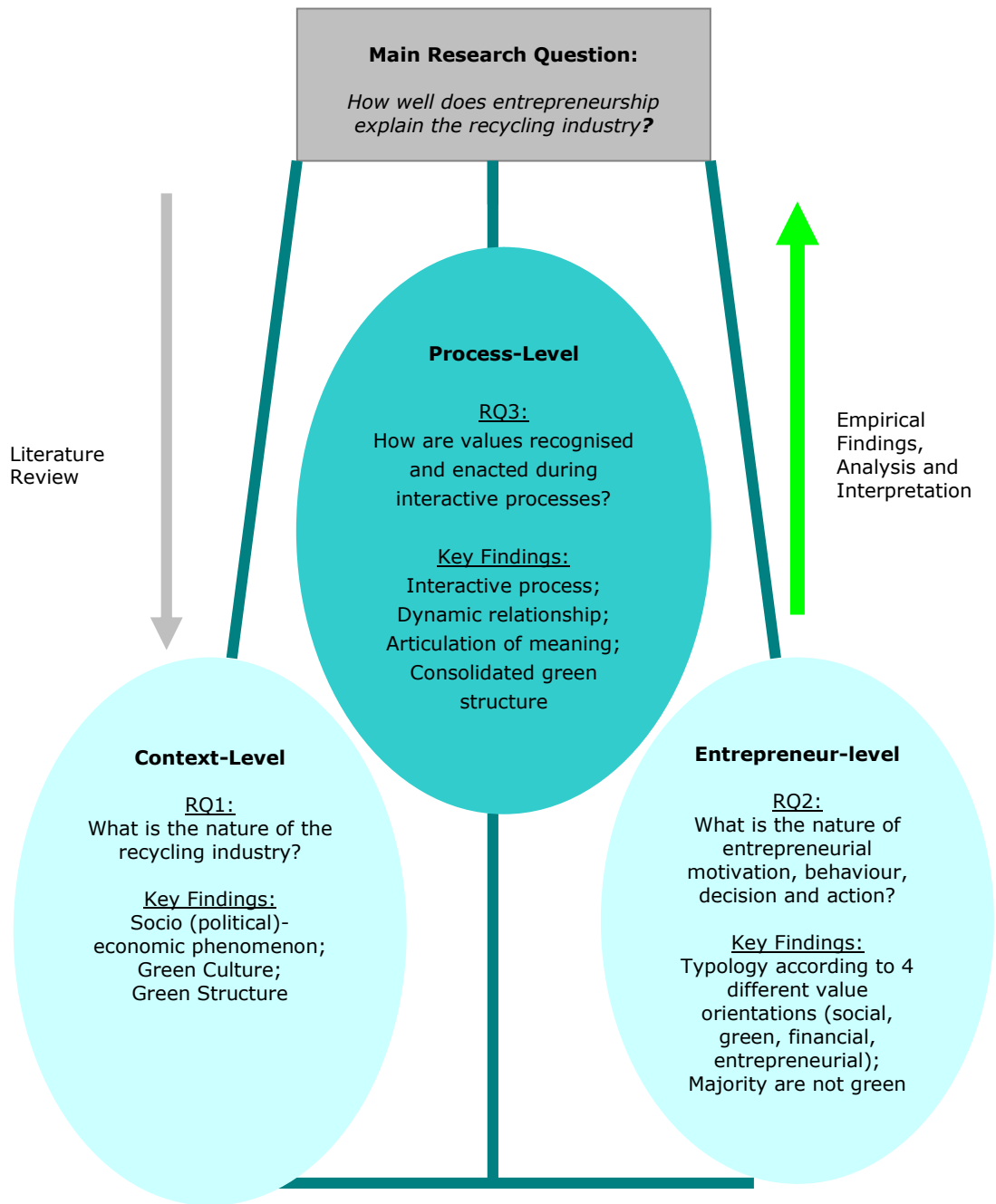


Figure 8.1: Key Research Phases and the Development of Insights

8.2.1 What is the Nature of the Recycling Industry?

In many ways, the analysis at context-level (Chapter 4) resonates with the recycling landscape presented in Chapter 1. For example, the increasing concerns about the social cost of dumping, the impact of the UK Policy Context on the changing (or changed) role of the recycling industry and the economics of recycling are all featured in common. Most importantly, the

analysis has identified that the recycling industry operates in an enduring green culture and structure; an assumption that underpins most of the recycling literature. The role of the recycling industry in landfill diversion was articulated (see Figure 4.1) and the contrasting cultural setting highlighted. Consequently, the analysis of the environmental context found that the recycling industry is embedded in a socio-(political)-economic context i.e. a context which arose from green concerns (social) and responses to the green concerns (political) which gave rise to economic and socio-cultural implications. In turn, this created economic needs and socio-cultural changes which made available contextual opportunities to be tapped by entrepreneurs. Furthermore, the availability of both financial and social opportunities, the different roles, ownership types and stakeholding structures seem to suggest contrasting cultural settings within an apparently unanimous green culture and structure in which the industry operates.

8.2.2 What is the Nature of the Recycling Entrepreneur's Behaviour, Motivation, Decision and Action?

At the entrepreneur-level (Chapter 5), it was found that recycling entrepreneurs do indeed operate in contrasting cultural settings but not in ways related to the different roles, ownership types and stakeholding structures or waste material streams of the recycling industry which are featured in the recycling literature. These cultural settings may encourage support (or otherwise) for the individual entrepreneur or business activities. However, it was found that it was the entrepreneurs' orientation toward a particular value perception of the recycling opportunity which shaped and drove the entrepreneurial process. This value orientation stands at the core and characterises the entrepreneurial motive and gives rise to entrepreneurial purpose, direction, behaviour, action, motivation, satisfaction, fulfilment, meaning and affect. Thus, the typology of recycling entrepreneurs deduced was not one based on the type of ownership or sector to which the recycling business belongs. Instead, the typology deduced four core patterns of value orientation, namely social, green, financial and entrepreneurial, representing a considerable departure from the recycling literature.

One entrepreneur (Beiste) was found to have a hybrid of value orientations at a particular point in time and six others (Daracha, Farlane, Carlton, Gilmore, Kyrk and Sima) inculcated new value orientations over time. An interesting finding which arose from this categorisation was that only two of the recycling entrepreneurs were found to possess a green value orientation at the start of their recycling entrepreneur careers. Whilst an additional green value orientation may be inculcated following the start-up phase, this too was relatively rare and was only observed in six of the entrepreneurs in the study and did not overtake the original orientation. On one hand, this finding represents a complete departure from the ways in which the recyclers are conceptualised in the recycling literature. On the other hand, it is a natural extension to the entrepreneurship literature.

8.2.3 How are Values Recognised and Enacted during Interactive Processes?

The findings at the process-level demonstrate the different stages of interactive processes between the entrepreneur and context. In the first instance, the interactive processes established the relationship between the entrepreneur and context (i.e. entrepreneurial agency). It was found that this relationship is founded on the entrepreneurs' position in the context because that position provided them with the necessary ties to access the financial, social and intellectual resources in order to tap the opportunity recognised and make possible the individual-opportunity interchange. That position also plays a part in the interactive processes between the entrepreneurs' cognition, affect and their social context. These ties are the underlying mechanism of the dynamic interactions between the entrepreneurs' cognition and affect with their social context, resulting in a set of values underpinning their aspirations and ambitions. The entrepreneurs' value orientation is configured by these elements, and in turn, the value orientation directs the entrepreneurial behaviour, motivation, decisions and actions.

The interactive process is a dynamic process. It shapes and gives significance to the entrepreneurial agency because the value orientation underlies the manner in which the entrepreneurs construct the recycling

opportunity. The interactive process at the opportunity construction stage is represented by confluence, recognition and interpretation. Firstly, the entrepreneurs being a part of the green structure suggest that there is a confluence of their individual values and the green values embedded in society. Secondly, the entrepreneurs' recognition of their ability to tap into the opportunity is considered. It is not the entrepreneurial opportunity recognition which distinguishes the entrepreneur and non-entrepreneur *per se*, but rather the ability to see how he or she could fit into that particular set of circumstances based on his or her position therein. Thirdly, the result of the confluence is reflected in the entrepreneurs' interpretation of the context. Interpretation gives meaning to the recycling opportunity and has been found to have a direct link with the underlying individual value orientation. This construction also underlies the business ideation and is enacted into a tangible form i.e. the recycling business. Thus begins the process of value extraction and creation through embeddedness. We see the entrepreneurs' harmonisation with the structure in order to utilise it because green ties needed to be forged and maintained for the opportunity to be tapped.

The green culture and structure, the collision of the entrepreneurs' individual values with society's green values and the transformations within a minority of the entrepreneurs in the study following enactment so that they too possess green value orientations seem to contradict the overarching green values that are produced following enactment. Furthermore, value orientation may or may not change following enactment but in all circumstances enactment is driven by the entrepreneurs' predominant value orientation which was established prior to their engagement with their recycling businesses. It gives meaning to enactment and the entrepreneurs' behaviour, decisions and actions are aimed at the articulation of this meaning. The understanding generated to inform the question, 'how are values recognised and enacted during interactive processes?' provided insights into how the entrepreneurial process took its course in the face of this tension between the green actions observed and the mostly non-green value orientations uncovered. Furthermore, the process of extracting value from the green structure, enacting the green

structure and giving back to the green structure complies with Giddens' Structuration Theory (1984), showing their embeddedness in the structure and maintaining the entrepreneurs' link with structure (Jack and Anderson, 2002); but nevertheless, makes the earlier mentioned paradox more apparent.

8.2.4 And Thus 'How Well Does Entrepreneurship Explain the Recycling Industry?'

Following the findings from the three-level analysis, it **can** be claimed that entrepreneurship can explain the recycling industry and can do so very well. A synthesis and summary of the findings of this research to demonstrate this point is provided in this sub-section.

As a first point of departure, it is useful to highlight that the research has validated the earlier point made in Section 2.4.1 i.e. the recycling entrepreneur is the central figure in the recycling industry, the creator of recycling businesses (for the purposes of this study, the aggregate units that constitutes the recycling industry):

- The recycling entrepreneur's value orientation (the configuration of his or her values, aspirations and ambitions being the outcome of the interactive process between cognition, affect and his or her social context) directs their entrepreneurial behaviour, motivation, decisions and actions, and gives meaning to enactment, as they manifest the entrepreneurship phenomenon in the recycling industry;
- The role of the recycling entrepreneur in the **social construction** of the recycling industry: firstly, through the recognition of contextual opportunity and interpreting it according to his or her value orientation; secondly, through the enactment of this meaning by forming the recycling business;
- The role of the recycling entrepreneur in the **reconstruction** of the recycling industry: firstly, through the process of harmonisation with the contrasting (compared to their individual values) green values of society so that they embed into the green structure and maintain the link with the green structure therein; secondly, this is made possible through the extraction of value from a structure which is embedded in a set of values

different from their individual values so that utilisation of the structure by maintaining and forging green ties is possible; thirdly, in their green behaviour, decisions and actions via recycling operations and providing an alternative to landfill;

- The role of the recycling entrepreneurs' entrepreneurial experiences (i.e. the entrepreneurial processes) in the production of values following enactment, especially the overarching green value;
- It was through the action of entrepreneurial agency that the green phenomenon became produced and re-produced in the structure (the consolidated green structure, represented by the entrepreneurs' green behaviour, decision and actions which contributed to actual diversion from landfill despite maintaining their initial value orientation as the pre-dominant driver of enactment);
- Applying the social construction orientation, a social construction framework was derived to explain the paradox of an enacted consolidated green structure of the recycling industry driven by the entrepreneurs' pre-dominant (non-green) value orientation and the following thesis has been derived:

The recycling industry is a social construction, a representation of shared understanding of a subjective reality given an objective nature through the language of 'green'. Its increasing interest and growing importance is a subjective social construction of reality, given an objective nature attached to the language of 'green' and intensified by the entrepreneurs' articulation of his or her reality. Transformative processes are reflections of the coming together of different social constructions (society's and the entrepreneur's) which results in renewed social constructions (consolidated version of society's social construction of reality) in a dynamic and circular relationship between structure and agency. (Extracted from Chapter 7)

Furthermore, the recycling entrepreneur is the central figure in the renewal of society's social construction of reality (i.e. not merely the central figure in the entrepreneurial process), by greening the structure while socially constructing their business reality driven by their value orientation.

This research has demonstrated that notions of entrepreneurship and the study of individual entrepreneurs **can** explain the recycling industry. It has illustrated the nature of the structure and agent. Further, it has illustrated how structure and agent mesh to direct entrepreneurial agency; and how agency relates with structure to shape and direct the entrepreneurial process. It has also provided a description of the recycling industry from an entrepreneurship perspective using the social construction orientation. The next Section will position this research in the light of existing knowledge and show the significance of its original contributions.

8.3 Original Theoretical Contribution

This Section is divided into two main sub-sections. The first sub-section highlights the novel approach used to generate understanding and insights about the recycling industry from an entrepreneurship perspective. The development of two innovative analytical frameworks and their features are presented. This is followed by a discussion of their contributions to the advancement of entrepreneurship research.

8.3.1 Novel Analytical Approach

The first point of departure in the analysis was to generate understanding of the research questions at the context, entrepreneur and process levels. To do this, the researcher adopted an analytical trajectory which is illustrated in Figure 8.2. It is through the adoption of this analytical trajectory that the purpose of the analytical framework (see Figure 8.3), to understand the entrepreneurial process in the recycling industry with its three major components (nature of structure, nature of agent and nature of agency; and the implementation of a social construction framework) is realised.

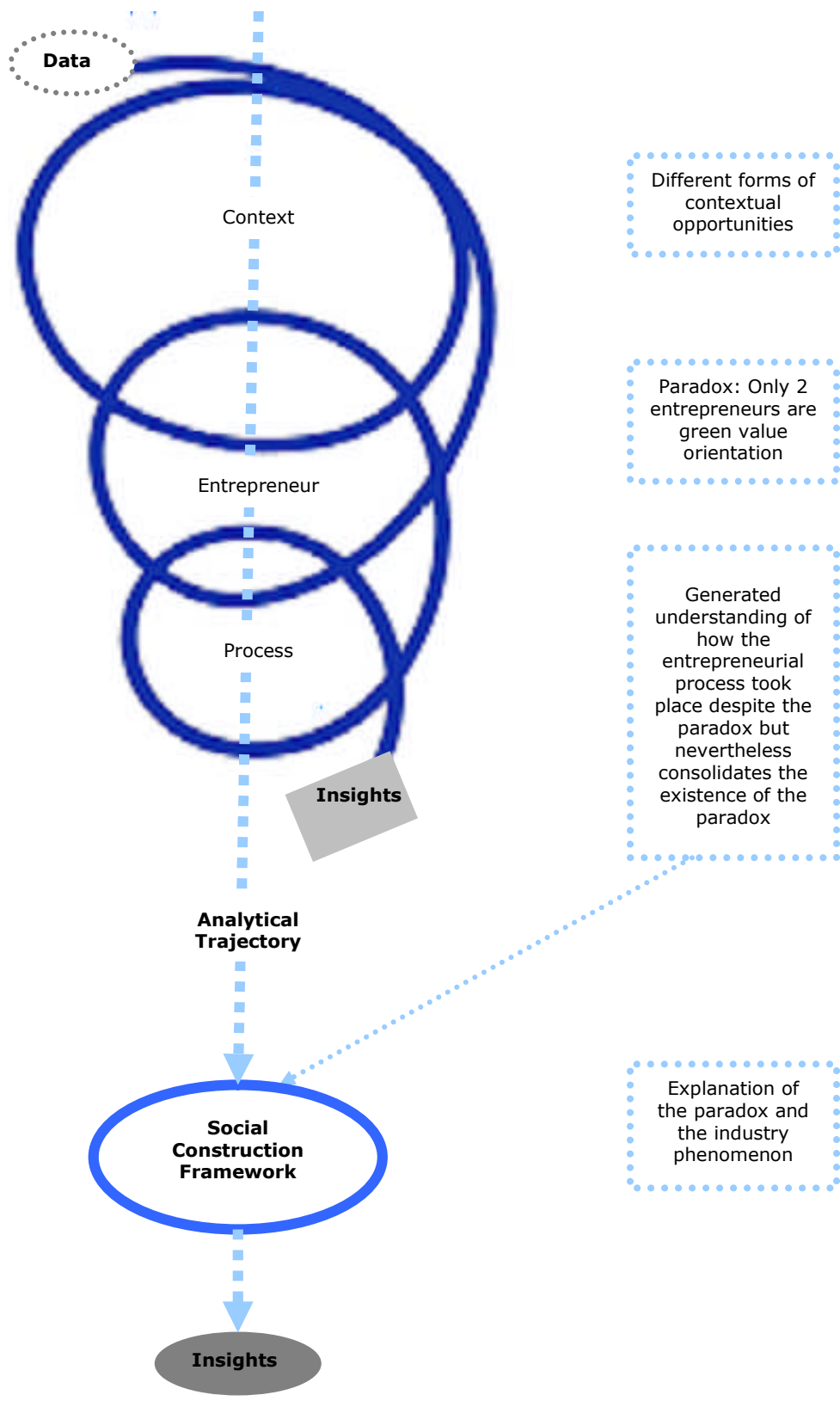


Figure 8.2: Analytical Trajectory

Linking the Analytical Trajectory to the Analytical Frameworks:

- ***Context-Level Analysis:*** The aim of this level of analysis was to generate understanding of the nature of the recycling industry. The analysis began at a broad level in order to provide a panoramic view of the industry. The contrasting cultural settings which emerged prompted a deeper analysis at the context-level in order to enhance understanding of the different social, political and economic strands. Hence, an investigation into the **nature of the structure**, was undertaken.

- ***Entrepreneur-Level Analysis:*** This analysis explored where the entrepreneur is coming from in light of the different forms of contextual opportunities (found at the Context-Level Analysis) as a basis to understanding the nature of the entrepreneur's behaviour, motivation, decisions and actions. Hence, this was an investigation into the **nature of the agent**.

- ***Process-Level Analysis:*** This layer of analysis was aimed at generating understanding of how values are recognised and enacted during interactive processes. It entailed a 're-visit' to the entrepreneur to seek understanding of how value recognition and enactment happened considering the paradox (of green actions taken without green values found at the Entrepreneur-level Analysis). Hence, this represents an investigation into the **nature of agency** by focusing on the nature of the interrelatedness between agency and structure during interactive processes. This encompasses: a) the interrelatedness between the agent and structure which created his or her role with regard to the opportunity and thereby founded and defined the agency; b) the interrelatedness between agency and structure in his or her execution of that role; and c) the entrepreneurial outcomes in terms of value output.

- ***To Move to a Higher Level of Analysis:*** The analytical trajectory was extended to facilitate a move to a higher level of analysis which aimed to explain the paradox revealed at the entrepreneur-level analysis and became more apparent following the process-level analysis of the

overarching green values created. Thus, it is possible to theorise the phenomenon of the recycling industry.

8.3.1.1 Analytical Framework to Understand the Entrepreneurial Process in the Recycling Industry

Figure 8.3 is a diagrammatic representation of the analytical framework used to understand the entrepreneurial process which emanated from the three-level spiral analysis (Figure 8.2) intended to generate insights into the research questions. Figure 8.3 also illustrates the interactive process between agent and structure as the foundation of agency and emphasises the interrelatedness between structure and agent which founded and directed the agency in its interactive process with the structure.

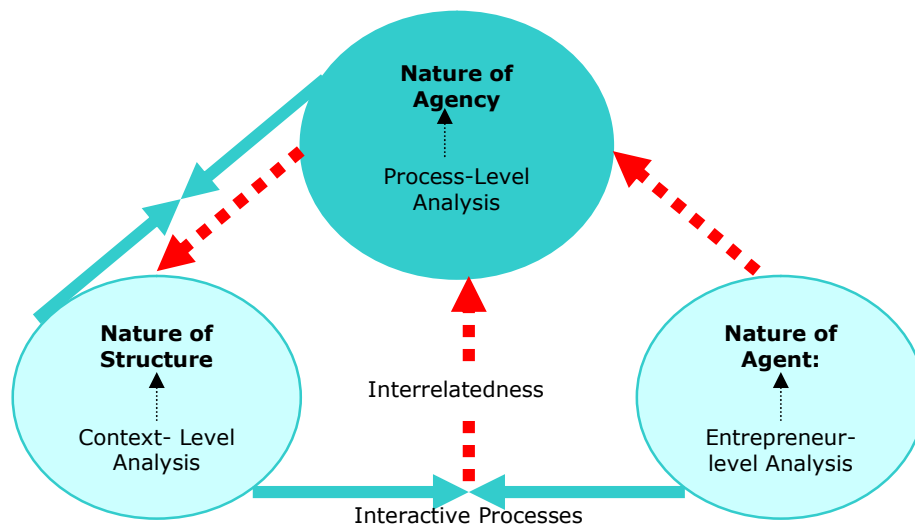


Figure 8.3: Analytical Framework to Understand the Entrepreneurial Process

The development of the framework involved an iterative process of exploring the nature of the structure, agent and agency. The entrepreneur's values were found to be the heart of the entrepreneurship phenomenon; underpinning his or her aspirations and ambitions and configuring his or her value orientation i.e. that value perception of the recycling opportunity. This brings us to the first significant and unique feature of the framework in entrepreneurship research: the use of **value orientation as the unit of**

analysis. The research process could not adopt the use of the entrepreneur and/or the recycling business as the unit of analysis as is often done in entrepreneurship literature because it was found that an entrepreneur may start off with more than one value orientation (Beiste); or an entrepreneur may inculcate additional value orientations (for example, Daracha) upon enactment. It was also found that the recycling business may have more than one entrepreneur (for example, Skene and Iver), each possessing their own value orientation which may not be the same. Perhaps more importantly, it was found that value orientation is the driver of the entrepreneurial process, moving in a continuum, directing entrepreneurial agency and **shaping the interrelatedness** between structure, agent and agency in a dynamic relationship. These subjects (structure, agent and agency) of the entrepreneurship phenomenon thus cannot be comprehended independently of each other. Instead, they need to be comprehended as parts of an interdependent whole which dynamically interact with each other. The entrepreneurship course is grounded in the entrepreneurial value which underpins the set of aspirations and ambitions and in turn objectifies a value perception of the recycling opportunity; and is governed by, and also governs how, these constituents interrelate with each other. Thus lies the second substantial and unique contribution of this thesis is the **dynamic nature of this framework**. It not only explores the nature of structure and the nature of agent as independent parts, but it proceeds to explore the interactive processes between structure and agent, which defined a role for the agent (agency), and the interactive process between the structure and that agency.

The analytical framework to understand the entrepreneurial process is an innovative way of analysing the entrepreneurial process within the field of entrepreneurship research. Additionally, the framework may be seen as a new way of implementing the social construction lens to understand the entrepreneurial process (in this case, in the recycling context). How this framework has advanced the field of entrepreneurship research is discussed in Section 8.3.2.

8.3.1.2 Social Construction Framework to Theorise the Recycling Industry

It has been said that the process-level analysis generated understanding of how the entrepreneurial process took place in the face of the paradox that only two recycling entrepreneurs were found to have a green value orientation. But nevertheless, the paradox was made more prevalent with the consolidated green structure as a consequence of enactment. Through their green actions, entrepreneurs without green value orientations are consolidating and reconstructing the green social norms. Consequently, the analytical trajectory (Figure 8.2) is extended to lead to a higher level of analysis, and a social construction framework (see Figure 8.4) grounded in the social construction orientation is used to explain the paradox and the phenomenon of the recycling industry.

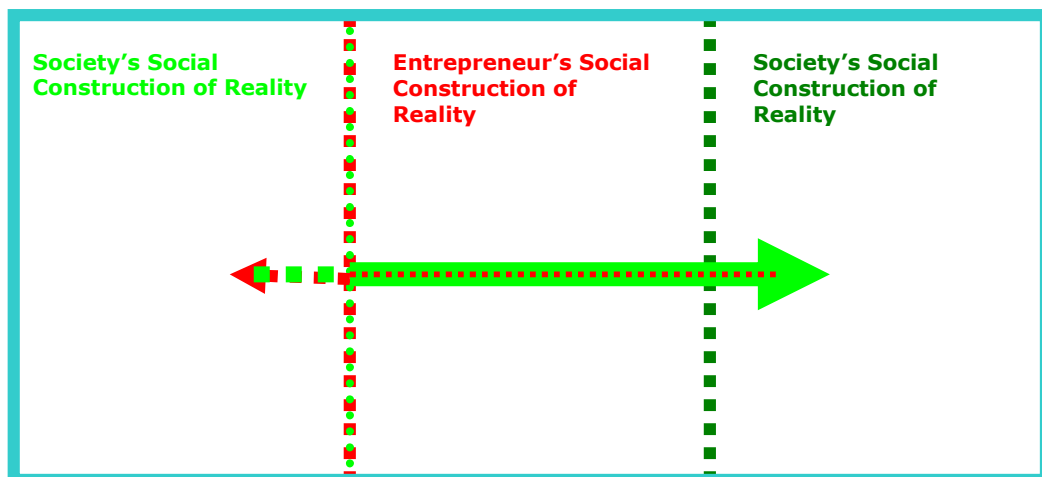


Figure 8.4: Social Construction Framework to Theorise the Recycling Industry Phenomenon

Given the collision of the individual entrepreneur's values with the green values embedded in society, it was deemed necessary to distinguish between society's social construction of reality and the entrepreneur's social construction of reality. There is the society's social construction of reality (i.e. the 'green') which is influenced by (as well as influence) the social, political and economic environments. And there is the social construction of the entrepreneur's business reality (i.e. the

meaning of the recycling business opportunity underpinned by value orientation). Therefore, the social construction framework is designed based on these two social constructions as distinct and separate.

In Section 8.3.1.1, it has been said that structure, agent and agency cannot be comprehended independently in an attempt to understand the entrepreneurial process. Likewise, the different social constructions cannot be comprehended independently in order to understand the phenomenon of the recycling industry. There will come a point in time when the social construction of the entrepreneur's reality 'embedded' in the structure will come in contact with the social construction of society's reality (the vertical dotted green and red line). It is from this point of contact which began the era of the recycling entrepreneur's role in the social construction and reconstruction of the recycling industry; the latter is reflected in a renewed and consolidated green reality. Therefore, a third phase of social construction of reality is added to the framework in order to provide the explanation of the industry phenomenon.

The social construction framework is a new analytical framework applied to explain the recycling industry. Additionally, both the frameworks may be seen as new ways of implementing the social construction lens to understand the entrepreneurial process and theorise an industry phenomenon in terms of the entrepreneurship literature (in this case, in the recycling context).

8.3.1.3 Unique Combination of Analytical Frameworks

In the first instance, both of the preceding frameworks are new analytical approaches in entrepreneurship research. In the second instance, the combination of these two frameworks provides another form of novelty of approach in entrepreneurship research. In particular, this refers to a theorising of the social construction lens as a means to theorise the recycling industry in ways not found in either the entrepreneurship or the recycling literatures. Chell (2007) noted that: *'The academic discourse identifies the necessary and sufficient conditions of the entrepreneurial process and leaves untouched the social construction of the variety of forms*

that this process may generate in practice' (p. 14). Perhaps, the novel analytical approach adopted in this study, with its emphasis on value orientation as unit of analysis and the dynamic interrelationship between structure, agent and agency has provided a solid foundation from which to begin working towards this goal. The combined framework is illustrated in Figure 8.5.

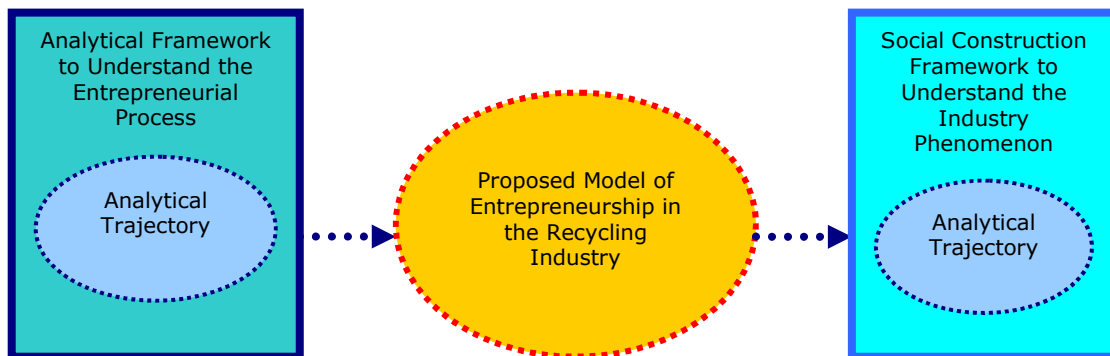


Figure 8.5: An Innovative Theorising of the Social Construction Lens to Explain the Recycling Industry

8.3.2 Advancements to Entrepreneurship Research

Value orientation is a way of understanding and perceiving the recycling opportunity, which is the product of the interactions between the entrepreneurs' cognitive and affective processes, as well as their relationship with their social context. Therefore opportunity perception is understood here as a social construction rather than as cognition, as it appears to be emphasised by some entrepreneurship scholars (for example: Krueger, 2000). This research has shown that value is at the core of opportunity recognition/ creation, and not the entrepreneur's cognition. In the first instance, value is the outcome of structure-agent interaction but nevertheless, the interaction is one which is dynamic and continuous and thus also involves the interrelationship between structure, agent and agency; hence giving rise to the new conception of values over time.

Furthermore, this research has provided a way in which the movement of value orientation may be explored. The analytical framework used to understand the entrepreneurial process serves this purpose. It has advanced the analytical development of the entrepreneurial process, which has been demonstrated in this research as governed by the relationship between the agent and structure in the first instance; and consequently, the dynamic agency relationship with the structure. Additionally, this analytical framework will potentially advance the conceptualisation of the entrepreneurship phenomenon. Neither structure nor agency can be defined in a static way but change and change each other over time. The bulk of the previous studies have attempted to 'identify' either structure (Reynolds *et al.*, 1994) or agency (Garud *et al.*, 2007), or both (Chiasson and Saunders, 2005). However, this is a quantitative shortcut which hampers our thinking about what is an ongoing, interrelated process. The implementation of Giddens' Structuration Theory for example, only looks at the dynamic relationship between structure and agency (see Anderson, 2000a; Jack and Anderson, 2002). It does not consider how the interrelatedness between the different subjects (structure, agent and agency) of entrepreneurship occurs. Indeed, Chell (2009) noted: '*Too few studies have attempted to measure the interaction between person and situation. This represents a gap in knowledge which, if addressed, would improve the predictive capability of the measure*' (p.41).

This research has:

- explored the structure and the nature of the structure;
- studied the agent and the nature of the agent, which is under explored in entrepreneurship research (Chell 2008);
- examined the process by exploring the nature of agency and this encompasses:
 - the interactive process between structure and agent at the first instance which produced the agency;
 - in that, it has identified value orientation as the element interrelating agent and structure, as well as defining the agency (the role of the agent in the individual-opportunity interchange);

- the consequent interactive process between structure and agency which constructed the recycling opportunity, formed the business ideation, executed the action of entrepreneurial agency and produced value outputs back to the structure in a dynamic fashion. In that, it has also incorporated the exploration of the dynamic relationship between structure and agency.

Having said that, the analysis has gone further and uncovered more insights. For example, value orientation has been identified as the driver of enactment. Value orientation moves in a continuum in what is part of the recycling entrepreneur because it drives enactment. Yet, it may be deemed to be an independent unit, distinct from what is portrayed in the entrepreneurs' behaviour, decisions and actions. Anderson (2000a), in using the entrepreneur as unit of analysis, has argued that the background of the entrepreneur configures the idiosyncratic entrepreneurial process and the key to understanding this is the entrepreneur's perception of value. The findings pertaining to value orientation in this research have made his point relevant. This calls for a shift from looking at the entrepreneur personally to looking at how he or she relates to the situations which are founded in that set of aspirations, ambitions and values. The rationale is that these elements configure the value orientation which in turn define the meaning of enactment.

The framework has also assisted the researcher to uncover how entrepreneurs relate to structure via processes of harmonisation. Although the ultimate entrepreneurial outcomes may not be a direct consequence of the entrepreneurs' harmonisation with the structure, the processes of adaptation have been demonstrated as a pre-requisite before any entrepreneurial event can take its course. This is an aspect which has not been given attention in previous entrepreneurship studies.

Perhaps the Interactionist Model (Chell, 2008; 2009) provides the closest framework to explore the interaction between structure and agency. The model of the psychology of the entrepreneur assumes that behaviour is the result of the entrepreneur's personality, structure and the interaction

between both personality and structure. However, the findings in this study have shown that the psychology of the entrepreneur which exists throughout the whole entrepreneurial journey is not confined to behaviour. The psychology of the entrepreneur is present throughout the entrepreneurial process and is reflected in behaviour and decisions; and actions are driven by the intangible forces of value orientation. Moreover, the interactionist model integrates social constructionism, cognitive constructivism and personality traits. The findings in this research have demonstrated the importance of value orientation over traits.

The above points are synthesised into a proposed model of entrepreneurial process. This model uses value orientation as the unit of analysis and the implementation of the dynamic nature of the framework which incorporates the interactive processes between structure and agent; and dynamic and continuous interactive processes between structure and agency. This is illustrated in the next sub-section.

8.3.2.1 Conceptualisations of the Entrepreneurial Process and Industry Phenomenon: A Way Forward

To begin this Section, it is important to mention that this model of the entrepreneurial process is the result of the qualitative grounded approach undertaken in order to study entrepreneurship as a process (as a means to understand the recycling entrepreneur), and adoption of the analytical framework (Section 8.3.1.1), with the recycling entrepreneur as the central figure in the entrepreneurial process (as diagrammatically illustrated in Figures 6.2 and 6.3 of Chapter 6).

Within the context of this thesis, the recycling industry is technically the aggregate recycling businesses' activities. These are all types of recycling operations and all types of waste materials, so that waste is diverted from landfill and its value can be reclaimed. It has been said and shown that the recycling entrepreneurs are the central figures in this system; they are also the ones who form and shape the recycling business according to their **value orientation**. This value orientation i.e. that particular value perception of the recycling opportunity is configured by a set of aspirations,

ambitions and values. These configurative elements are the outcomes of the interactive processes between the entrepreneurs' cognitive and affective elements with their social context. The entrepreneurs' position in the context provides the necessary ties to access the social and financial resources required to tap the opportunity. Thus, the individual-opportunity interchange is possible and entrepreneurial agency is defined. The subsequent construction of the opportunity is an outcome of the interactive process between entrepreneurial agency (underpinned by value orientation) and the existing green structure.

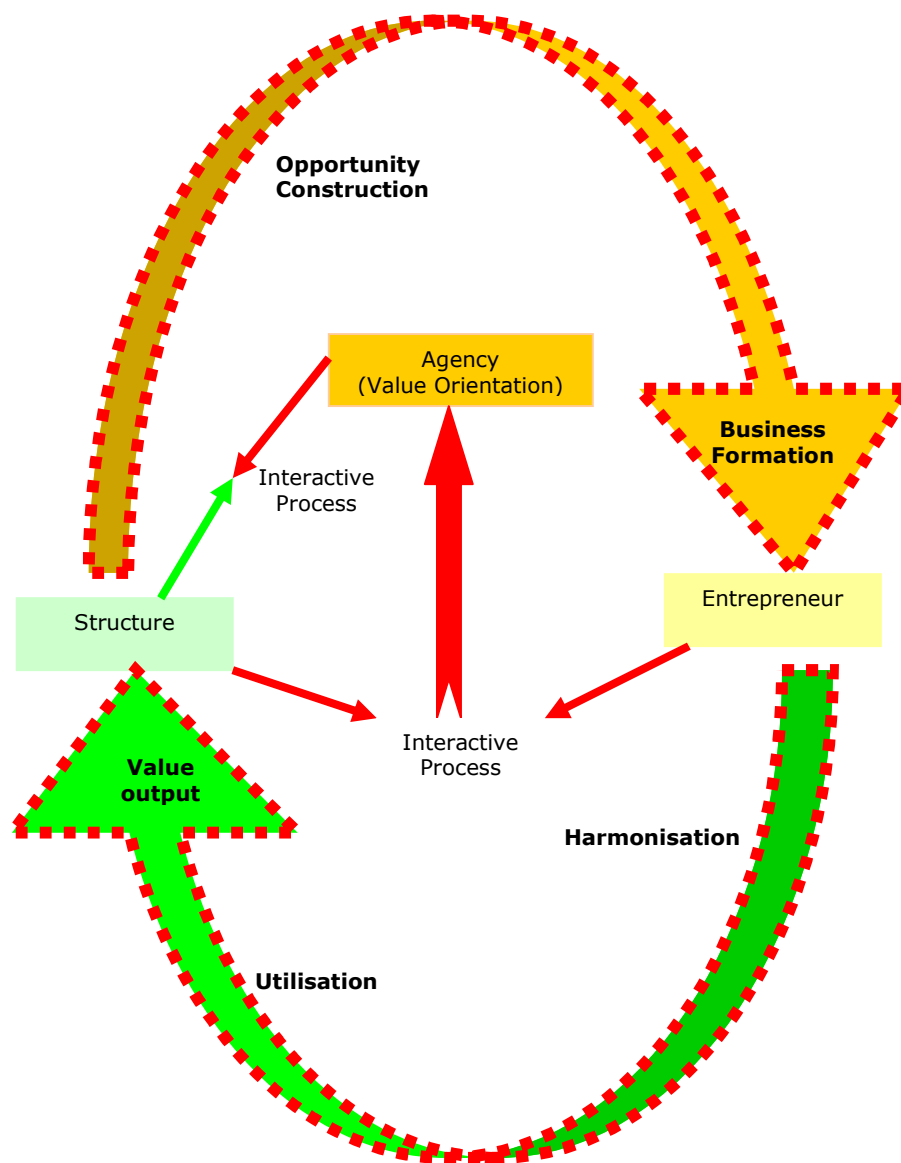


Figure 8.6: A Proposed Model of Entrepreneurial Process

On one hand, this thesis has demonstrated that value orientation stands at the core of the entrepreneurial process. It gives a sense of significance to entrepreneurial agency because meaning is derived from the context following value orientation which formed the business ideation, shaped the business and drove enactment. On the other hand, this study has demonstrated the criticality of structural conditions and the entrepreneurs' relationship therein in directing and shaping their behaviour, decisions and actions. Indeed, it has been emphasised that apart from two of the entrepreneurs in the study, the motives of the entrepreneurs are not related to green values and green values are not the driver of enactment. However, the process of harmonisation via adaptation to the green structure and the transformation of the six entrepreneurs to the extent that they too embed green values and ties can therefore be forged and/ or maintained to articulate their meaning of enactment and demonstrate their relational and structural embeddedness.

Can the model be challenged on the grounds that the interactive processes between the agent and context might not necessarily produce a consolidated green structure? The findings in this research have demonstrated this. If we probe further into the movement of value orientation during enactment, we see the inculcation of an additional green value orientation for six entrepreneurs (Daracha, Kyrk, Sima, Gilmore Farlane and Carlton), an additional social value orientation for Skene, an additional financial value orientation (Bean) and an additional entrepreneurial value orientation (Ramsey) (see Table 5.10 of Chapter 5). However, Table 6.3 (see Chapter 6) shows that green value alone is created during enactment for all the entrepreneurs. In this sense, this research also demonstrates that the green structure **takes precedence** over the entrepreneur's value orientation in terms of the actual manifestation of entrepreneurial practice. This signifies the criticality of the social context in the entrepreneurial process and demonstrates that entrepreneurship is also a social process.

Expanding from the above, the model does not only illustrate that entrepreneurship is a social process. Perhaps more importantly, it says that

it is the entrepreneurs' interactive processes with the social context which govern the extent of the outcomes of the entrepreneurial process and the entrepreneurship phenomena. Whilst value orientation is the driver moving in a continuum, directing entrepreneurial behaviour, motivation, decisions and actions; values embedded in society collide and in contrast with these value orientations, the point of sovereignty lies in **how the entrepreneurs relate** to that social context in their interactions. Processes of adaptation (accept-as-it-is) and minded behaviour are the defining pre-requisites for subsequent entrepreneurial events and value outputs. Diverting a little from the subject under discussion, perhaps this is a call for entrepreneurship scholars to place greater emphasis on how entrepreneurs relate to the context in which they operate i.e. their relationship with the situations at play. This means to placing less emphasis on the entrepreneur himself or herself; or the situations at play but focusing instead on their interplay. The model presented in Figure 8.6 can thus be summarised as follows:

Entrepreneurial process is represented by the role of entrepreneurial agency, shaped and governed by the entrepreneurs' interactive processes with their social context:

Firstly, the configuration of value orientation by a set of values which underpin his or her aspirations and ambitions;

Secondly, through harmonisation and utilisation, the entrepreneurs embed in the existing green structure, driven by their value orientation as the pre-dominant motivation and thereby reconstruct an enacted consolidated structure which is dynamically enacted via continuous interactive processes between structure and agency.

As scholars of entrepreneurship have often posited, there is no universal definition for entrepreneurship. Whilst this remains true, this research has provided an innovative analytical framework which may serve a very useful approach in for understanding the phenomenon of entrepreneurship, as it relates to the emergence and development of industries. The ambiguities relating to the entrepreneurship phenomenon are inevitable. Nonetheless, this framework may be the start of a universal way of theorising the social

construction lens which can be used to enhance the understanding of process.

The entrepreneurs' embedding into the structure maintains the link between agent and structure in a dynamic, interactive relationship, resulting in the coming together of the two different social constructions. In this confluence, the entrepreneurs' adapt so that they are able to utilise, embed and enact the structure. This interaction brings about a new renewed form of social construction of reality which is reflected in the consolidated green structure. It is imperative to highlight that the paradox implicit in the entrepreneurial process i.e. that only two entrepreneurs possessed an initial pre-dominant green value orientation, the rest of the entrepreneurs nevertheless contribute to the actual diversion from landfill and the greening of the socio (political) and cultural context. This paradox led the research to an extension of its contributions to advance the field via the implementation of a social construction framework which leads to a proposed model of theorising an industry phenomenon.

8.3.2.2 A Proposed Model to Understand an Industry Phenomenon from an Entrepreneurship Perspective

An approach to gain insights into the industry phenomenon is lacking in entrepreneurship research, whereas industries are drivers of the economy and SMEs are the crucial engine of the economy. For example, Shaw *et al.* (2008) posited that the number of SMEs following the expansion of the UK service sector but empirical studies tend to focus on larger organisations. The social construction framework to theorise the recycling industry phenomenon may be a useful analytical tool which can be applied to further the understanding of the recycling industry in different contexts; and also to understand the phenomenon of any industry in general.

In Chapter 4, it has been said that the offshore industry plays a significant role as the supplier and customer for recycling businesses. In Chapter 4 we have also seen that the waste streams in the recycling industry in the North East of Scotland are not unique to other parts of the UK, or the world at large. In specific terms, this implies that the offshore industry does not

contribute to any implied unique characteristics of local recycling businesses. That range of waste material stream remains regardless of who the major supplier of recyclable materials is. This seems to imply that waste streams and recycling projects which are highly emphasised subjects in the recycling literature and the policy context are not important when it comes to actual diversion from landfill. Rather it is the actions of the recycling entrepreneur which provides an alternative avenue for land filling that makes the difference. There is thus an indication of potential generalisability of the findings in this research and the applicability of this framework. It is also relevant to mention that the findings of this research at this level have been presented to BEP-NE and the reaction gave confidence that the data and analysis is valid and reliable.

A small but increasing amount of attention is being given to the use of the social construction perspective (examples: Downing, 2005; Nicholson and Anderson, 2005; Goss, 2005; Fletcher, 2006) in entrepreneurship research. However, these studies have not studied the industry from an entrepreneurship perspective using this social construction framework i.e. one which takes into account the coming together of two different sets of social constructions. Neither has any entrepreneurship literature attempted to theorise the emergence and development of an industry: firstly in this depth and breadth; and secondly in this manner. If it can, and it has been demonstrated to be able to be applied in the context of the recycling industry which is multi-faceted in terms of opportunities, cultural-settings and sectoral attributes, there is a possibility that it too can be applied to generate insights into the context of other industries. For example, the mobile phone industry, the telecommunications industry, the fashion industry, organic farming or other forms of farming.

8.4 Other Domains of Contribution to Knowledge

This Section presents the other domains of contribution to knowledge, namely the development of the entrepreneurship and recycling literatures, and the enrichment of empirical evidence.

8.4.1 Development of the Entrepreneurship Literature

This research has made a new contribution to the academic field of entrepreneurship in terms of insights and understandings generated that are specific to the recycling industry. Particularly, this refers to the entrepreneurship phenomenon with regard to the role of recycling entrepreneurs in the construction and reconstruction of the recycling industry. For example, Anderson (2000) argued that the '*entrepreneurial process is the creation and extraction of value from an environment that involves a shift in value from an existing use value to a higher market value*' (p. 103). Positioning this within the context of the recycling industry, the existing green structure has been used so that the existing green value is shifted to a hybrid of value output i.e. the obvious higher market value attached to the recyclable waste, the enrichment of the entrepreneurs' specific value and the overarching green value. Furthermore, traditional mainstream entrepreneurship literature tends to link entrepreneurial activities to economic outcome. Whilst the contribution of recycling industry to economic regeneration cannot be denied (for example, Agarwal *et al.*, 2005), this research has also demonstrated the importance of environmental and social benefits as consequences of enactment in the recycling industry. Researching the recycling industry which generated these understandings is unique within the context of the entrepreneurship literature.

Furthermore, this research has 'introduced' and discussed the recycling entrepreneur in breadth and depth that has not been done in previous entrepreneurship studies. In the first instance, it has developed a new typology of recycling entrepreneurs. The descriptive categories provided add substantial knowledge and understanding about the recycling entrepreneur (see Section 2.4.3) which fill a gap in previous entrepreneurship research. Further, the role of the entrepreneur as the agent who is central in the crystallisation of opportunities has been made well known (Section 2.4.3.1). This research has demonstrated that the recycling entrepreneur is the agent central to the crystallisation of recycling opportunities. Perhaps even more important, it has also demonstrated his or her role in the social construction and the renewal of social construction

of the recycling industry. In relation to that, this research also 'introduced' the recycling business in a manner which has not been previously conceptualised either within the entrepreneurship or the recycling literatures. Specifically, this refers to the role of the recycling businesses as the medium through which the role of the recycling entrepreneurs is carried out and displayed.

The findings of this thesis will serve as a foundation to explore this form of entrepreneurship. And it serves as a solid foundation. The approach adopted in the literature review has resulted in a very sound streamline of focus and the qualitative inquiry conducted has resulted in rich and thick data which provide vivid illustrations of what is really going on in the recycling industry at all the three levels of analysis.

From another standpoint, the examination of entrepreneurship in the recycling industry has also enriched the explanatory power of theorising entrepreneurship in general. These contributions are summarised in the remaining parts of this sub-section.

At the context-level analysis, the social, political and economic strands were probed in order to conceptualise the nature of the recycling industry. Although scholars have emphasised the criticality of these strands (Bird, 1988; Chell, 2008), the manner in which they have been used to provide insights into entrepreneurial environments or to understand the emergence of an industry seems to be under-explored.

At the entrepreneur-level analysis, the typology of recycling entrepreneurs which is a combination of the typology of social, green, financial and entrepreneurial value orientation examines the nature of the agent which is an area which lacks attention in entrepreneurship research (Chell, 2008) and is completely absent from the recycling literature. This typology also enriches insights into the notions of social, commercial and green entrepreneurship but maintains its individuality as a new strand in entrepreneurship research. Where it may be argued that entrepreneurship in the recycling industry is in effect green entrepreneurship, it can be rightly

contended that this research has enriched the profundity and scope in the conceptualisation of green entrepreneurship which is under-developed (Harbi *et al.*, 2010).

The different stages of interactive processes between the entrepreneur and context also broadened the scope of insights into the nature of entrepreneurial agency. Amongst others, it accounted for the cognitive, affective, relational and structural embeddedness of the entrepreneurs. Conceptualising the recycling industry as a socially constructed phenomenon on the one hand, demonstrates the weaknesses of cognition theory and the traditional traits theory. On the other hand, it also demonstrates the importance of the emerging modern traits theory within the context of the interactive processes between cognition, affect and structure.

Additionally, the introduction of the notion of harmonisation has expanded the scope and understanding of elements such as adaptive behaviour within the context of entrepreneurship. For example, this research has demonstrated the importance of entrepreneurs' adaptation. Entrepreneurs' adaptation has been recognised in entrepreneurship studies (Etzioni, 1987, Anderson, 2005) and has come a long way from the economists' view which equated it to marginal cost and revenue (Harrod, 1939). Liu (1998) for instance, wrote about structural adaptation in a broad context. Entrepreneurship scholars generally recognise adaptation as part of entrepreneurship without exploring it further. This research links it with an attitude of harmonisation i.e. a process of harmonising with the external by acceptance and minded behaviour. Consequently, adaptation is a critical pre-requisite for subsequent entrepreneurial events to take place. Yet, the emphasis on adaptation in the entrepreneurship literature is not currently well developed and has been relatively neglected when compared to creativity (Ward, 2004), risk-taking propensity or self-efficacy (Zhao *et al.*, 2005) which appear to be favoured as explanations in the extant literature. It is also interesting to add that excessive self-efficacy and risk orientation may not benefit performance (Rauch and Frese, 2007). Furthermore, entrepreneurial skills have been defined as '*creative opportunism*' (Long,

1983) indicating the instinctive ability to recognise possibilities and to make things happen. It is thus worth pondering whether entrepreneurial skills could be exercised without the entrepreneurs' harmonisation with the structure, particularly when the entrepreneurs' values do not match those of society.

8.4.2 Development of the Recycling Literature

Whilst this research has generated new understandings and insights in the entrepreneurship literature about the recycling industry in breadth and depth in a manner not done before, it has also made substantial contributions to the recycling literature. The academic field of entrepreneurship has barely been integrated with that of recycling. This research has therefore founded a new field of inquiry within the recycling literature; and it has done so with in-depth illustrations, multi-level analysis and illuminating insights.

Firstly, this research has examined the recycling entrepreneur, which is a new focus in the academic field of recycling. The extant literature in recycling tends to conceptualise 'a waste stream' or 'a recycling project' and does not consider the role of the initiator. Moreover, the emphasis on recycling behaviour has been directed at householders and organisations (on a smaller scale), and the impact of recycling targets on Local Authorities with regards to landfill diversion. There has been no attempt to link these 'central' issues to the actual 'behaviour' which affected the landfill diversion i.e. the formation and operation of recycling businesses as alternative avenues to landfill diversion.

Secondly, this research has introduced, broadened and deepened the meaning of recycling industry in the literature. Previous research conducted by recycling scholars have merely treated the recycling industry in segments often related to individual waste streams while attaching the label 'recycling industry' to it (Section 2.2). The depth and breadth of the conceptualisation of the nature of the recycling industry in Chapter 4 is therefore unique for the recycling literature.

Thirdly, this research has considered the recycling industry from the perspective of a new theoretical lens i.e. the social construction view. Given that the green culture and structure is a socially constructed phenomenon (Chapter 7), introducing the adoption of social construction as a theoretical lens to the academic field of recycling is reasonably expected to generate new insights pertaining to public participation, behaviour and motivation.

8.4.3 Enrichment of Empirical Knowledge

It should be highlighted that the theoretical contributions and developments to the literatures discussed in the preceding Sections are all grounded in empirical evidence. This means that the research has enriched the state of empirical knowledge in both of the academic fields of entrepreneurship and recycling.

8.5 Research and Theoretical Implications

The production of the model of entrepreneurial process and the illustration of the recycling industry phenomenon further strengthens the point that entrepreneurship can explain the recycling industry. This research has demonstrated this by focusing on the value orientation of the recycling entrepreneur and taking the stance of studying entrepreneurship as a process and as an interactive process between structure and agent, and structure and agency in a dynamic fashion.

The fieldwork has resulted in the collection of rich and thick empirical evidence which has enabled a thorough grounding of theorising the recycling industry from an entrepreneurship perspective based on empirical data. As mentioned previously (especially in Chapter 2), previous empirical insights in this area have lacked depth. It is only from this rich and thick data collected that the researcher was able to deconstruct the pre-understandings of the entrepreneurial process and the entrepreneurship phenomenon, and later on reconstruct them based on data. These understandings and insights of context, agent, process and outcomes formed a novel and solid foundation beyond superficiality for an entrepreneurial theorising of the recycling industry.

The above mentioned results of this research follow the adoption of qualitative inquiry via in-depth unstructured interviews as the primary method of data collection. This was complemented by observations and the flexibility to apply complementary subsidiary techniques borrowed from traditions such as story telling and life history analysis. A positivist orientation would be incapable of generating understandings of the contingent and temporal variables at the context, agent, process and outcome levels. For example, it would not be able to capture the flexibility of the recycling entrepreneur and the fluidity of the recycling business over time. It would also not be able to identify value orientation as the appropriate unit of analysis which does not coincide with the popular application of either the business or the entrepreneur as the unit of analysis in previous research. On the contrary, the use of the recycling business or entrepreneur as the unit of analysis would distort the composition of the recycling entrepreneurs' entrepreneurial experiences. Indeed, the aim of the recycling business is green **but** the value orientation of the recycling entrepreneur is not! It has been demonstrated in Chapter 5 that entrepreneurs in the same recycling business may not necessarily perceive the recycling opportunity in the same way (for example, Skene and Iver). It has also been demonstrated that the entrepreneurs' perception of the recycling opportunity can change over time. Thus, the adoption of qualitative inquiry makes a substantial contribution to this research. First, it grounded the collection of rich empirical data. Secondly, it grounded solid empirical analysis pertaining to what is really going on in the recycling industry in entrepreneurship terms. In other words, it further provides the possibility of generating qualitative understanding which is critical to the investigation of the relational components of cognitive, affective and structural dimensions which lie at the heart of the social construction orientation in this research. Thirdly, the generation of insightful empirical knowledge pertaining to the theorising of the recycling industry from an entrepreneurship perspective is generated from a grounded multi-level analysis of rich empirical data that follows from an organised and structured analysis in each of the three levels (context, agent, process) as well as across the three levels, and across a systematic time frame. This approach

enabled knowledge generation of the entrepreneurship phenomenon as a whole.

In brief, this research will serve as a solid foundation to explore the phenomenon of entrepreneurship in the recycling industry. As mentioned earlier, the approach adopted in the literature review has resulted in a very sound streamlining of focus for the fieldwork. Moreover, the qualitative inquiry conducted resulted in the collection of rich and thick data which provided vivid illustrations of what is really going on in the recycling industry at all three levels of analysis. Furthermore, the robustness of the analytical approach adopted generated a solid understanding.

8.6 Implications for Policy and Practice

The findings and conceptualisations in this research also offer practical knowledge for entrepreneurial practice and policy-making. This Section will highlight some of these implications.

8.6.1 Policy-Makers

Entrepreneurship in the recycling industry does not merely result in environmental benefits (namely, landfill diversion). This research has shown that the entrepreneur's specific value is also created. Knowledge about the entrepreneurs' value orientation and how it works serve as an important guide to make policy in such a way as to catalyse environmental benefits, and synthesise it with benefits to the local economy.

The impact of creating green sentiments amongst the public and also organisations, which appears to be the focus in the policy context, has been shown to be far less important than the actual behaviour, decision and actions of recycling entrepreneurs. The driver of enactment which effectively addresses landfill issues at present are not green values. Perhaps, this is a call for a paradigmatic shift i.e. to focus on creating conducive spaces for potential and existing recycling entrepreneurs, for example, specific support targeted for the recycling businesses. Whilst Government support is currently focused on the third sector, this study

highlights that more than 90% of the recycling industry comprises recycling businesses in the private sector.

8.6.2 Entrepreneurial Practice

For the existing and potential recycling entrepreneur, this research has demonstrated ways of acting in order to create value and ways of utilising the structure to meet individual motives. Furthermore, potential recycling entrepreneurs can reflect on how their values and existing relationships may fit into their potential venture. It is also interesting to note that some of the entrepreneurs in the study have explicitly stated that the interview process has made them reflect on issues that they had not done previously.

8.7 Future Research

This research is restricted to the North East of Scotland. It would be good to conduct further research in a different range of empirical contexts. For example, other parts of the UK, other parts of Europe, in developing countries such as India and Morocco; or even in the United States. The novel analytical approach could be applied in this context to see the extent of differences and similarities between the findings in these countries. The generalisability of the model for entrepreneurial process and the explanation of the industry phenomenon could also be tested.

It would also be interesting to carry on with this research and conduct a longitudinal study to capture the continuing social constructions, further changes to the movement of the entrepreneur's value orientation and impact on value output. The sample could also be extended to include new recycling businesses and comparisons could be made with the previous ones.

It would also be good to extend the findings of this research through more focused study of selected entrepreneurs. For example, the relationship between strong and weak ties with the entrepreneurs' actions. In-depth case studies could also be conducted.

From another perspective, scholars from the recycling field could consider the use of a social construction lens to understand recycling behaviour. Reflecting on the first phase of social construction of reality [Social Construction of Reality (I)] as presented in Chapter 7, and that the public assumes both customer and supplier position in the industry's stakeholding structure as well as belonging to the green culture and structure, which the recycling industry operates in, using a social construction lens may prove illuminating if applied to a study of public participation, behaviour and motivation.

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