Social enterprises with environmental objectives: saving traditional orchards in England and Germany

Abstract

Social enterprises (SE) re-invest their profits towards a social mission. They have proliferated as post-industrial economies try to meet social need with limited state funding. Scholarship has expanded accordingly, although SEs with primarily environmental objectives have been neglected. This article examines how SEs, in regions noted for wildlife-rich orchards, fund nature conservation by marketing juice and/or cider, thereby attempting to revive economic possibilities for this traditional land use. A common thread between the SEs is their initiation by conservation organisations, and it is possible to group them within models of market intervention. Three models in particular are examined that reveal different approaches and success in orchard conservation. SE scholarship is marked by a wealth of case studies, and to avoid simply adding to this richness, the paper revisits Jen Beckert’s ideas on the social order of markets. His theory that actors strive for stability through forms of co-ordination in dynamic market ‘fields’ is applied to SEs aiming to produce positive conservation outcomes – or environmental order – from their market interventions. Within limits, social order advances understanding of environmental SE by identifying the multiple challenges they juggle, and revealing the environmental outcomes of SE engagement in markets.

Keywords: social enterprise, biodiversity, orchards, Jens Beckert.
1. Introduction

Social enterprises (SEs) have received significant attention in recent years. Interest has emerged following the introduction of market mechanisms within public services (Osborne et al. 2008, Macmillan 2010, Chew and Lyons 2012), and in relation to the belief that SEs hold potential to provide social benefits because they redistribute their profits towards a social mission (Bull 2008). SEs thus realize the ‘blended value’ (Emerson 2003, Hebb and Harji 2009) of combining economic and social gains, and operate on the basis of ‘multiple bottom-line[s]’ (Tencati and Zsolani 2008) from their commercial activities.

SEs have increasingly been identified with what Toner et al. (2008, 10) regard as ‘part of a liberal paradigm, which seeks to reduce the direct role of the state’, and there has been a substantial shift in public funding for the voluntary sector from grant-aid to service contract (Pearce 2003), particularly since policies of economic austerity have become the ‘new normal’ (Corry 2013). Scholars have found it difficult to agree upon a definitive expression of SE (Nicholls (ed) 2008, Teasdale 2010), with some even suggesting that a fixed definition is restrictive (Dees 1998). The difficulty partly lies in the distinct roles that SEs serve in different countries (Nyssens (ed) 2006), and because SEs can adapt their offer in relation to the requirements of funders (Teasdale 2009). Alter (2007) has developed a ‘hybrid spectrum’ of SE - a graduated range of incarnations which implies that SE can be regarded as both an organizational form and an activity. An official SE definition from the former UK Department for Trade and Industry is:

\textit{a business with primarily social objectives whose surpluses are principally reinvested for that purpose in the business or in the community, rather than being driven by the need to maximise profit for shareholders and owners. (DTI 2002)}

Detailed understandings have emerged from the European Commission (2011), which include the primacy of social impact, the marketing of goods and services, innovation and transparency.
SE scholarship has expanded accordingly. Cross-disciplinary networks such as the EMES European Research Network, the Third Sector Research Centre, and the Skoll Foundation have made substantial contributions to understandings of SE in the UK and Europe. Given such interest in the practice and theory of achieving societal benefit through market mechanisms, it is surprising that little has been written about how SEs could meet pressing environmental challenges (exceptions include Scott-Cato et al. 2008, Edwards et al. 2010). This paper attempts to fill this gap by revisiting and extending Jens Beckert’s examinations of the dynamics of social forces within markets. In particular, this approach extends knowledge of SEs beyond the context-dependence of case studies to a greater understanding of how SEs create environmental benefit through market intervention. The paper begins with a short review of SE development in the two subject nations (the UK and Germany), followed by the introduction of the environmental mission, namely the conservation of wildlife-rich orchards in regions with a cultural and economic history of their traditional cultivation. Case studies illustrate how SEs have emerged in both countries as a way to renew economic possibilities for orchards to preserve their ecological value, and to generate market income by trading in apple juice and/or cider. The application of Beckert’s framework is then used as a way to analyse how market interventions of the SEs create environmental outcomes. Orchard conservation, it is argued, is sustained through re-adjustment of economic and environmental goals, underpinned by the alignment of value, cooperation and competition. In exploring the effect of SE interventions within a market field, the data reveal different blends of environmental effectiveness in relation to traditional orchards.

2. Understandings of SE in the UK and Germany

Support for UK SE development was a feature of New Labour administrations (1997-2010) and included the initiation of regional SE development agencies. Strategic programmes to support SE-sector capacity such as ChangeUp included the funding programmes Futurebuilders (2004) and Capacitybuilders (2006). Such schemes were accompanied by
ministerial support *via* the Office of the Third Sector (2006), which was arranged within the Cabinet Office. Under the Conservative-Liberal Democrat Coalition (2010-15), political ideology renewed and reconfigured SE as a response to ‘the Big Society’ (Mohan 2011), while the Public Services (Social Value) Act compelled public authorities to consider the social benefits offered by allocating service contracts – including from SEs - from 2013. Studies of the development and impacts of such policies have included critiques of the emerging gap between state and third sectors (Macmillan 2013a), and of the risks of exposing SEs that provide social services to market-facing funding and financial evaluation methods (Wells 2013).

The ‘Big Society’ has continued a shift from inter-dependence to separation between the state and the third sector (Macmillan 2013b), and SE is likely to play a key role in raising money and securing independence for the latter. Opportunities for developing SEs in the UK have been given a push by the political co-ordination of structures which encourage alternatives to state-led activities; a pull has come from external economic circumstances, inspiration from elsewhere, and by new ideas about tackling social need through civic participation.

In Germany, the development of social enterprise has emerged neither through a coordinated policy in favour of SE *per se*, nor as a state alternative. The reasons are firstly that as an imported term from trans-national research, social enterprise means little to the Germans (Birkhölzer 2005); and secondly that enduring social problems were fully intended to be solved by the German social market model (Defourney and Nyssens 2008). Germany, in common with other post-industrial European economies, has faced social challenges arising from recessions and shrinking welfare budgets (Birkölzer et al. 2005). In particular, Germany experienced the need for public sector reform following re-unification in 1990. In these contexts, a significant role for German SEs has been to support people into work, especially in the light of unemployment rates of up to 20% in parts of the east (Deutsche Welle 2004).
Differences between English and German SE contexts include a high degree of scholarly attention, political interest, structural support and ministerial champions in the UK not matched in Germany; UK SE is conceived as a broad approach to providing goods and services with socially redistributive functions, while in Germany SEs have limited social integration functions handed down from the state. Despite such distinctions, SEs have emerged in both countries as off-shoots of environmental organisations to pursue their objectives through the market.

3. The environmental mission

Few scholars have explored the potential for SEs to create environmental change. This is unsurprising, according to Vickers (2010), given that only a quarter of UK SEs see themselves as contributing to environmental aims and 5% identify their main aim as environmental, usually linked to waste management. With Vickers, Fergus Lyons has scrutinized the work of environmental SEs including Community Supported Agriculture schemes, identifying different strategies for organizational growth or knowledge transfer (Vickers and Lyons 2014). A wide range of literature has emerged on so-called alternative food networks (for a comprehensive review see Goodman et al. 2011), which discusses how organizational innovations and anti-corporate economic approaches attempt to configure food supply chains to promote better ethical, rural development and environmental outcomes.

Environmental research provides insights into how the complex structure and multiple economic functions of traditional orchards imbue them with enormous habitat value (Ullrich 1975, Crocker 1998, Herzog 1998, Vogrin 2011, Robertson et al. 2012). Studies also underscore the importance of orchards as signifiers of local distinctiveness, cultural identity and landscape history (Cloke and Jones 2001, Crowden 2008, MLR 2009) and, in the case of Germany, a direct influence on the understanding of Heimat (Jordan 2011). Others warn that because orchards strengthen the weave of the social and geographical fabric, with their loss ‘generations of hard-won wisdom... dies’ (Common Ground 2000, 12). Despite the biological, cultural and economic importance of orchards, serious losses have been
experienced in each country as a result of agricultural change, and stemming this is the environmental challenge facing the SEs discussed in this paper. Extensive surveys in England and Wales carried out by the People’s Trust for Endangered Species (PTES) concluded that 90% of orchards have been lost since the 1950s, and many of those remaining are in a poor state (Burrough et al. 2010, Oram et al. 2013). In Germany, Ullrich (1975), Rösler (1996) and Miller (2010) specify the direct relationship between orchards and ornithological, entomological and fruit biodiversity. The latter has become reduced to a handful of internationally familiar varieties including Golden Delicious, Granny Smith, Gala, and Braeburn, having commercially displaced local codlins, pearmain, or Langstiels. While some remnant orchards are protected (e.g. within Sites of Special Scientific Interest), the future of this habitat depends on continued replanting of trees.

Grants for replanting have previously come from local authorities, lottery funds and via EU agri-environment schemes in areas of historic orchard importance, but public austerity has proved constraining. Localised grant-funding for new orchards is, in any case, too little too late:

‘...we can plant as much as we like, we won’t be able to stop [the decline] ... we won’t succeed in tackling the decline in our orchards using current means.’ (GC, 7)¹

In the light of constraint on public finances, environmental organisations in both countries have established innovative SEs as responses to the decline of orchards that aim to revive their economic possibilities and cultural relevance, rather than preserve them as habitat relics.

4. Case study selection and research methods

4.1 Rationale

¹GC, 7 refers to a specific source or participant in the study, but the specific details of this source are not provided in the given text.
Three SE models are introduced below namely, the estate, networked market and market-building models. These emerged from fieldwork in England and Germany in 2010-11. Fifty semi- or un-structured interviews were carried out with NGO workers, commercial processors, SE directors, and horticultural scientists. The resulting SE models reveal a gradual increase of complexity of operation, hence there were more subjects to inform the estate model than the less common market-building model (see Table 1 for a characterization of SE models). Seven interviews were conducted with direct participants in the estate model, plus 25 further individuals associated with orchard and countryside management at the National Trust; 13 interviews were conducted with direct participants in the networked market and 5 in the market-building model. Initial manual coding was informed by Lyson’s work on the social connectedness of agricultural enterprises (Lyson 2004) and by cross-national work by EMES (Bourgaza and Defourney 2001) that attempted to clearly define the dimensions of SE.

The regions selected were the western districts of Bavarian Franconia and the adjacent districts of Baden-Württemberg east of Stuttgart; and the English counties of Cornwall, Devon, Dorset and Somerset. The rationale was, firstly, that all regions are distinguished by extensive tracts of orchard, and a tradition of commercial harvesting of fruit for drink production. Consequently, secondly, each location has an important cultural connection to orchards. Finally, in each case, the SE was initiated by a conservation organisation, whose members play an important role in marketing.

Previous employment with the charity Common Ground connected the author with contacts at the National Trust, and the German conservation organisations Naturschutzbund Deutschland, Bund für Umwelt und Naturschutz and Deutscher Verband für Landschaftspflege. Interviews were structured in relation to (i) the management and biodiversity of orchards; (ii) the products and how they are marketed; (iii) the motivations and support structures behind the SE; and (iv) social outcomes linked to orchard work.

4.2 Case studies
Levels of SE complexity are characterized by land ownership, labour availability and methods of retailing, which influence the choice of SE incorporation in each model and the associated management of income. Risk, linked to capitalization and market exposure, becomes a particular burden within market-building SEs. A summary of the main characteristics of each model appears in Table 1.

*Table 1: Main characteristics of environmental SE models*

<table>
<thead>
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<th>Estate</th>
<th>Networked</th>
<th>Market-building</th>
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<tbody>
<tr>
<td>Incorporated as</td>
<td>National Trust project</td>
<td>Registered association with profit cap</td>
<td>Un/limited company, co-op</td>
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<tr>
<td>Market intervention</td>
<td>Predominantly in-house production and marketing</td>
<td>Re-alignment of existing market arrangements</td>
<td>Commercial competition</td>
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<tr>
<td>Finance</td>
<td>Grants, sales</td>
<td>Start-up trading, limited certification income</td>
<td>Commercial investments</td>
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<tr>
<td>Labour</td>
<td>Volunteers</td>
<td>Parent NGO members</td>
<td>SE staff</td>
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<tr>
<td>Product qualification</td>
<td>National Trust</td>
<td>Organic</td>
<td>Local</td>
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<tr>
<td>Land ownership</td>
<td>National Trust</td>
<td>Private</td>
<td>Private, parish councils</td>
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<tr>
<td>SE risk level</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Highest individual SE product output (litres)</td>
<td>9,000</td>
<td>600,000</td>
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**a) The estate model**

The UK National Trust (NT) can be cast as an environmental SE of some scale. It holds substantial assets on behalf of the public, and pursues income-generating activities that fund its environmental mission, particularly through its commercial arm, National Trust Enterprises, which has an income in excess of £60m (National Trust 2013).

In 2008 the NT carried out an audit of its orchards (Rotherham 2008) where these formed part of an historic estate. This revealed ‘*an awful lot of orchards, over a hundred in its care – probably got double that*’ (EO, 1). Subsequently, NT was appointed co-chair by (and with) Natural England (NE) of the UK Habitat Action Plan for traditional orchards (JNCC 2008). NE also awarded over £500,000 to the NT to lead a project called *Conserving and Enhancing Traditional Orchards: England*. Among other activities, this allowed the NT to establish estate-based enterprises marketing cider and juices to finance orchard conservation. NT
tenant farmers were not targeted within the *Conserving and Enhancing* programme, which de-lineates the estate-based activities that are linked to visitor experiences – heritage, leisure and catering – from commercial agriculture activities on NT land. It also echoes earlier suggestions that SE is a part of the multi-functional third sector, rather than an alternative model to displace or, in this case, even to complement commercial agriculture.

The value for the NT of orchards is multiple, not all of which are environmental:

> [For the NT] Orchards are about (i) the economics of sustainable land uses; (ii) the challenge of the loss of domesticate and wild biodiversity; and (iii) engaging people.  
> *(EP, 1)*

Thus the NT must consider at least three interests in relation to orchards: horticultural heritage, biological value, and public engagement, which latter the NT regards as an important strategy for increasing membership (NT 2010).

Fieldwork at five NT properties covered a combined orchard area of 40 hectares producing 10,000 litres of juice and 8,000 litres of cider, using volunteer labour. As a consequence of the homogeneity of organisational structure (each SE is a project under the management of an estate) and the Natural England grant, the NT SEs are presented here as a collective case study.

Marketing orchard products is straightforward for the NT, because the majority of the sales for estate-based orchard products are within estate shops and cafes. This secures a better return for the NT compared to selling apples wholesale to a commercial juice maker who sells in outlets outside the NT: ‘we actually generate more money from mistletoe than ... as a bulk supplier of apples.’ *(EE, 1).*

Where estates have the advantage of exclusive retail access to visiting and supportive members, orchard products are not cheap, and face competition from other goods:
When I sell it [cider] to the shops, Enterprise gets involved. [They take a] huge cut, a huge cut! ...they will buy ... cider from me at £1.75 for a 750ml bottle and they sell it for £4.75, the shop makes a £3 profit and the project doesn’t. (EB, 5).

...most orchard products are well-sold but ... each product has to earn its keep, that is justify its shelf space. ... Cider may sell reasonably well but not as well as biscuits and jams. The question arises: is the demand for cider likely to last in the future? It may prove necessary to market cider beyond the property to expand sales. (ER, 4)

For volunteers, the attractiveness of working in orchards is substantial:

*It can be very social being out there in a big group picking apples. It’s lovely on some days when it’s perfect blue skies... almost spiritual.* (EB, 10)

In fact, as the NT focuses ever closer on its ‘engagement’ objectives, practical tasks that rangers formerly undertook are increasingly the work of guided volunteers.

...paid staff are no longer easily able to pursue the same level of practical work as in the past and their main driver is becoming engagement. Those senior rangers who continue orchards work on their estates, are thus individuals who simply love orchards, or who have a supportive manager, or are achieving major engagement gains through orchard work. (EX, 2)

**b) The networked market model**

The networked market model is named from the way that some SEs re-organise the connections within existing supply chains to secure enhanced environmental outcomes. A starting point is *Aufpreis*, or price premium, used by all German orchard SEs. *Aufpreis* requires consumers to pay extra for environmentally qualified juice, in order to fund a supply premium, and represents a reallocation of money from consumers to farmers. In south Germany, it is usual that any fruit tree owner, including householders, may supply presses when seasonally convenient. After checking quality, the press buys the fruit,
providing a credit note to the farmer. The press extracts, bottles and markets the juice via in-house distribution, or a third party. Juice buyers – shops, householders, catering outlets – pay the press. In some cases, credit notes may be presented only when the press has sold its stock.

While this lag represents a cash-flow challenge for orchard owners, a more significant problem is the low market value of juicing apples, linked to global market rates of around €6-7 at the time of the fieldwork. This is not enough to incentivize farmers to maintain their orchards in ways which produce the complex habitat structures and although agri-environment subsidy is available, it is limited:

For 100 trees that’s €250 a year. Well, if I convert my orchard to a field of maize, I can do without the €250 pretty well. (GA, 10)

This economic problem is the motivation for SE intervention in the marketplace:

...if you want to conserve orchards through economic husbandry, then I need €20 for 100kg (of apples), ... then it will be sufficient... that’s do-able, you just have to organise it... (GA, 7)

This quotation, from the leader of an SE founded in the mid-1990s, suggests that current barriers to the ability of the market to incentivise habitat management are a matter of poor organization that can be tackled through market intervention. The method for achieving this is as follows: environmental NGOs establish SEs as subsidiary associations that develop supply contracts with farmers. These offer enhanced market prices (usually double or triple) on condition that orchards are maintained in ways recommended by the parent NGO, which also offers training to farmers. The SE will ensure that apples from this arrangement are separated from other fruit delivered to the press. Existing relationships with the press remain unchanged except that farmers are paid upon delivery and juice made from apples from contracted orchards is clearly labelled. The German conservation organisation NABU has developed a national etiquette (bearing the image of the little owl, a bird that thrives in traditional orchards), which presses add to bottle labels. In this way, in addition to the
continued use of local labels distinctive to each press, a unified national label indicates the application of an *Aufpreis* adaptation supported nationally.

Two challenges need to be addressed for this supply chain to work. Firstly, the press, as the commercial risk-taker, must feel assured that the outlay for enhanced supply prices will be recovered. Secondly, the juice made under the SE contract must stand out in the market. In both cases the SE plays a vital role. It will mobilize a local marketing campaign in the media, at public events and with a range of local companies and civic groups. Its key message is environmental: ‘*in our region... [orchards] ...are very important for the landscape picture. ...our region here is enhanced by orchards.*’ (GC, 1)

The SE, through its links with its parent NGO, also markets juice to its members, either directly by buying *Aufpreis* juice from the press as a wholesaler and retailing it to members, or indirectly by encouraging members to buy the juice in local outlets. Buying juice is thus an act of nature conservation. ‘*The [members] they simply have an ideology, an interest... the preservation of the landscape and a purposeful leisure occupation*’ (GC, 2). Such efforts to protect the cultural landscape are not lost on municipal buyers: ‘*It goes without saying, that this juice is available in the town hall and at events in the town.*’ (GA, 3)

c) The market-building model

While both German SE models apply *Aufpreis*, market-builders directly attract commercial investment through the promise of generating and redistributing profits. This, in turn, generates a greater SE risk than the other models. The risk is based on the direct purchase of apples by the SE and the need to reward investors. Apple purchase creates a seasonal demand for labour as collection points must be staffed, fruit graded and shipped for pressing to a contracted press. Profits from sales finance above-market-price supply incentives for farmers to manage their orchards for wildlife. Where estate and networked SEs can minimise risk *via* a captive clientele or by retaining most commercial operations within existing supply chains, commercial risk is internalised in market-building SEs. In deciding on the best organisational structure for any SE, a judgement needs to be made
about which maximises the ability to distribute profits, but without presenting too much of an administrative or personal burden for environmental SE leaders:

[a GmbH, a limited company] is not quite so easy, but it was a consideration for our security. With a GmbH your liability is tied to a capital reserve, whereby with [an unlimited status] I am there with house and home, everything... and that’s a problem. (GH, 1)

In another SE, a limited company was established in 2006 after initial inception via the local landscape protection association, and with funding from EU rural development funding. Within six months the SE had attracted 34 commercial investors and a total of €20,000, including from owners of drinks or catering businesses such as wholesalers, distributors and bar owners. A key motivator for the SE was to be able to survive without dependence on volunteers and grants:

...it was one of our maxims right from the start that we would have no volunteers. To build up a limited company, I have to look for people, ... I have to make contracts, ... I have to think about labels... so I need a lot up-front at a time when there is not yet any money in the pot. (GFB, 15).

Investment helped to finance warehouse rental, the employment of a business director and distribution manager, and paid seasonal workers at fruit collection points. It also provided a capital sum against which loans could be raised for product development. A range of 27 products are made under contract by a local juice company and distributed via the drinks logistics company of one of the SE’s investors. The SE behaves like a conventional firm, competing with, and displacing, other drinks suppliers in the local market. This relies on detailed market know-how and benefits from the contacts of the commercial investors, which integrate innovative SE juice products as niches into their existing portfolio of products. By 2011, this SE had a turnover of €300,000.
Within other market-building SEs, local authorities and environmental organisations have become advisory associates where the SE represents a commitment to public policy, such as Local Agenda 21, or in cases where local NGOs act as trademark owners of product brands. In some cases parish councils own public orchards and sell their fruit to market-building SEs thereby earning Aufpreis income and becoming contractually committed to active habitat management. Some market-building SEs own hydraulic presses. One such case incorporated as a co-operative, raised €26,500 from members, and employs local parents to operate the press work during the mornings of school days. In such cases of asset ownership, opportunities exist for presses to be hired to other SEs or farmers.

Market-building SEs have privileged regional provenance over organic certification as a market niche, enabling some to source from other SEs in times of a poor local crop:

‘...our region has an overlapping supply range with [another] initiative that uses the same criteria to buy juice and that stores [its product] at the same presses we [contract] (GFa, 5).

4.3 Environmental performance

The environmental effectiveness of the three models proved variable. Robertson et al. (2012) suggest three ways in which orchard conservation objectives can be met: by increasing knowledge of the ecological value of orchards; by protecting the range of fruit varieties these hold; and by ensuring that orchards are well-maintained for wildlife.

It is notable that each NT estate undergoes a biological survey ‘every 12 years...they provide management recommendations...’. In practice ‘...that’s not going to happen because the group [survey team] is too small and there are far too many properties’ (EV, 4). ‘Phew! It’s a nigh-on impossible job’ (EV, 8). The NT does well in conserving fruit varieties, having started a number of mother-orchards as repositories for graft stock. Yet although orcharding is a labour-intensive and consistently attracts seasonal volunteers, only a minority of NT orchards (and excluding any in farm tenancies) is being actively managed
through SEs. Despite the NT’s close association with the delivery of the UK’s Habitat Action Plan, an assessment of environmental performance is lacking.

The networked market applies environmental monitoring systems supported by links with parent NGOs. In each case, farmers have converted to organic status because: ‘...it’s not a problem for the land owner to convert, he doesn’t have to change anything in his husbandry...’ (GA, 9). SEs in these examples have become agents for a German organic certification organization, so that two forms of SE income are generated: profit from limited sales to NGO members, and by earning a commission for organic inspection. At one SE (GB) the three largest suppliers withdrew from the SE contract, because the model has worked well enough for them to make independent arrangements with the press. Meanwhile environmental progress seems positive: ‘...we can very clearly prove that there has hardly been any retreat in traditional orcharding in our region in the last 20 years.’ (GA, 13)

In the market-building format, state officials may be recruited as non-executive environmental advisors to the SE, alongside the original parent NGO. This may include representatives of designated landscape networks and local authorities with environmental, educational and community outreach responsibilities. Where such authorities are prepared to contribute public finances because SE objectives can be aligned with provincial environmental priorities (MLR 2009), evidence is required of environmental benefit.

4.4 Jens Beckert: from social to environmental order

Such case studies provide insights into local practices, yet the wider challenge remains of how environmental SEs might prosper in the light of funding cuts, fluctuations in policy support and the scale of orchard losses. The absence of a unified SE concept outlined above contrasts with a wealth of empirical research that examines structural and functional challenges linked to SE activity. As Richard Swedberg (2006) comments, ‘the current literature on social entrepreneurship is richer in inspiring examples and anecdotes than it is on analytical power’ (Swedberg in Steyaert and Hjorth 2006, 21). Most recently, O’Neill and
Gibbs (2016) have highlighted the importance of a wider conceptual understanding of how ‘green entrepreneurs’ create change.

The SEs discussed above are essentially examples of alternative food networks. AFNs have been examined in relation to their ability to enhance food security (Sonnino and Griggs-Trevarthen 2013), to protect rural livelihoods (Goodman 2004), or to lever economic transition (Smith 2007). Yet such approaches help only marginally in assessing the environmental outcomes of market intervention. For example, none of the SE formats here seek to overturn the dominant food system.

Recently, work on how SEs meet social objectives has been explored by using techniques from economic sociology, including institutional theories which examine how formal structures such as legal forms, municipal contracts and financial innovations affect the redistributive and socially-directed operation of SEs (Pinch and Sunley 2015). Sophie Dubuisson-Quellier (2013) has reviewed how ‘social movement organisations’ attempt to modify the environmental practices of companies and consumers, emphasizing how SMOs convert environmental performance into market value. Notably, her work draws on Beckert’s analyses of the formulation of prices. However, in this paper the central application of Beckert’s notions of (i) social order and (ii) markets as fields captures the combination of social forces active in markets, while offering an analytical structure for understanding environmental SEs beyond the level of the local case study. In particular, Beckert makes three key contributions in the exploration of environmental SE. Firstly, he sees markets as affected by regulatory and legal restrictions, cultural contexts, ethics, cooperation and consumer behavior (Beckert 1997, 2), suggesting that markets are socially structured and can be influenced to achieve particular outcomes. Furthermore, markets are presented as inherently unstable, and market actors must face three ‘problems’ (Beckert 2007) in the pursuit of the stability that is desirable to plan investment and innovation, namely how to:

- form clear subjective values in the market;
• realise profit through \textit{competition}, when competition relies on market disequilibrium, from which actors wish to be shielded; and
• manage \textit{co-operation} in the market when it is difficult to control issues of quality, reliability or competence when these are abrogated to a co-operation partner.

Beckert (2007) thus discerns a social order within markets, in which actors try to negotiate these problems to achieve stability.

Secondly, Beckert aids SE analysis by suggesting that earlier sociological explorations of the market have focused on isolated factors which influence the social structure of markets. Instead, he casts markets as ‘fields’ which combine social forces \textit{via} the interactions of cognition (ideas and understandings), networks and institutions (Beckert 2010). Environmental SEs can be understood using these Beckertian frameworks, as: (i) seeking to influence the interactions of social forces in markets by (ii) entering the market to contribute to the negotiation of problems to (iii) secure favourable \textit{environmental order} as an outcome of their interventions. In other words, if formats of environmental SEs are analysed in relation to the market dynamism they create, it should be possible to identify and reconfigure a constellation of activities, relationships and structures to improve the environmental performance of local exchange.

To explore the effect of market interventions by orchard SEs, the concepts of co-ordinating value, co-operation and competition were applied to the three SE models in turn. Following this, interview data was arranged within Beckert’s field framework, shown in Figure 1, allowing the dynamics of market intervention to be inferred from the case studies.
Beckert’s diagram presents markets as arenas in which cultures, laws and established practices (institutions) are influenced by interacting networks of actors, who use their knowledge to help them perceive of, and analyse, what is happening in the market, and then devise strategies either to protect or challenge dominant social orders (ie. market power). There are advantages for SE scholars in using the field concept.

Firstly, and most simply, Beckert’s framework offers a usable format to disassemble substantial bodies of qualitative data and structure their thematic analysis. An example of this is that, in considering the co-ordination problem of value, it is clear that the high retail
premium used in the UK contrasts with the German Aufpreis mechanism. In the former, the NT applies the large mark-up demanded by its retail policies, customers face no competition from similar products, and co-operation flows from the internal connection between the NT and the estates. An exception is where the NT acts externally, as a wholesaler, and earns little. Consequently, NT’s expensive juices release an ‘ethical premium’ (Gourevitch 2011) redistributed towards the environmental objective. By contrast, networked market SEs have less influence on market value, because they have no production base of their own, and because product pricing is dependent on the commercial press: ‘We establish the [environmental] criteria and the marketing is done by the commercial partner’ (GA, 13). Networked SEs must generate extra income from the supply chain in order to cover the supply price premium. This is achieved when the SE promotes the environmental and cultural values of the juice, and the press is able to redirect these messages through its sales channels, resulting in adequate sales for a lower premium.

This suggests that new forms of market co-ordination, initiated by the SE, have created new material values, and prices, which reflect the societal value of orchards. Similar discussions can be generated about co-operation and competition, for example: that in the case of the networked market competition is actively avoided because supply chain (social) structures must be retained; and that different models of SE can co-operate in the case of poor harvests; and so on.

A second benefit of the field concept is that it refocuses analysis on the meso-level dynamics of regional markets rather than on individual local organisations, with the benefit that local context is one, but not the dominant, analytical factor. And finally, a third benefit is that, for parties wishing to plan for environmental SE development, Beckert’s field framework helps to identify and predict the impacts of specific institutions, actors and concepts (such as shared cultural identity) on market dynamics which reciprocally interact and produce a new social - and environmental - order in the market.

5. Conclusions
This paper has sought to add to the currently limited number of studies on the environmental effectiveness of SEs through their interventions in local and regional markets. Selected environmental SEs share the objective of conserving regionally important orchards, valuable for wildlife but not for commercial agriculture, thus threatening their loss.

Beckert’s utility for understanding SEs has been tested by adapting theories on social order and markets as fields. In relation to the data it can be shown that, for example, networks within market-building SEs recast _Aufpreis_ from being a tool to extract added value to become an environmental policy institution. Likewise, both the estate and networked models show successful translation of the cultural symbolism of orchards into marketing criteria for a product despite plenty of lower-priced competition. The market access offered through the outlets of commercial shareholders in the market-building model allows a much broader base of customers to be cultivated, who may not be members of environmental organisations while, by contrast, the success of the estate model relies on cognitive framings of an idealized rural heritage.

But Beckert offers no silver bullet. His interest is usually directed towards understandings of economic sociology and the nature of particular markets, and does not capture environmental performance. Some challenges in applying the analysis emerged. In particular, in the networked market, the positive reluctance to compete, and the relative powerlessness of the SEs contrasts with Beckert’s picture of market actors trying to secure, or react to, shifting hierarchies, proving Neil Fligstein’s (2001) point that ‘actors sometimes can transform social structures but most of the time fail to do so’. Meanwhile, Anthony Giddens (1976, cited in Gemici 2012) rejects order as a principal sociological concern in favour of other factors, such as industrial change, modernity or capitalism, and Kurtuluş Gemici (2012) suggests that Beckert (2010) lacks an adequate appreciation of purely economic influences on market order, such as interest rates (Gemici 2012). Finally, Sunley and Pinch (2014) note a rise in using field theory for studying SE stakeholder structures and
reciprocal methods in achieving goals, and have applied Beckert’s analysis to socially motivated SEs, finding it ‘not social enough to capture the depths of social preferences’.

Despite these critiques, Beckert’s framework presents a useful lens for SE researchers by generating insights into the ways that clusters of SE formats stimulate market co-ordination. It is emphasized that the environmental gains presented above followed SE market intervention and they reveal different blends of environmental effectiveness.

Nature conservation and rural development policy implementation is regionally delegated through established federal structures in Germany, and following ‘localisation’ in political decision-making in the UK. UK conservation policy, in particular, has shifted (Lawton et al. 2010) from prioritizing rare species and designated sites, towards landscape-scale, connected habitats (in relation to orchards, see Bailey et al. 2010). Future research is therefore needed on the potential of SEs as innovative organisations in integrating the economic, cultural and ecological functions of valued landscapes.
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The reference codes for individual quotations from interviews used in the text are defined thus: quotations from English interviewees have the prefix ‘E’ and quotations from German interviewees have the prefix ‘G’. Subsequent letters identify each anonymous interviewee in an alphabetical sequence. Finally, the number relates to a page location within the transcripts.