

Migration, meaning(s) of place and implications for rural innovation policy

Abstract

Advocates of rural innovation policy argue that understanding innovation through the eyes of local dwellers, offers an alternative to theorisations focusing on proximity and clustering. The paper furthers this agenda, suggesting that heterogeneity within rural communities, which is the outcome of differential meanings assigned to place by entrepreneurs with distinct migratory experiences, influences innovation. Specifically, it produces an innovation basis broader than expected given the effects of distance and low business densities. This supports the pursuit of diversification policies, the leveraging of knowledge resources, particularly transient and new, beyond the individual enterprise, and the engagement of diverse entrepreneurial actors in policy-development.

Introduction

Stimulating rural innovation has recently emerged as a distinct policy domain (Knickel, et al., 2009). The distinctiveness of rural innovation policy (ENRD, 2013; OECD, 2014) is supported by the following argument in the academic literature. Prevailing theoretical constructs emphasise the importance of proximity and the region as the main unit of spatial analysis (Ward and Brown, 2009), and draw overwhelmingly from research coming from urban areas. In this intellectual setting, innovative activity is clustered in specific regions (viewed as both independent of actors and given), possessing large numbers of actors (firms, universities and others) connected through a dense network of linkages that facilitate resource flows: particularly of knowledge. A corollary of this view is that rural areas¹, by virtue of their small population of enterprises and the absence of higher education provision and R&D facilities (Kalantaridis and Bika, 2011), offer limited scope for localised knowledge spillovers, and thus form unfavourable settings for innovation. Exponents of the distinctiveness of rural innovation policy thus suggest that action should draw on an understanding of innovation through the eyes

¹ For the purposes of this paper rurality is defined as a spatial category dominated by large open spaces and, relative to the national context, small settlements (with population density of less than 150 inhabitants per km²).

of rural dwellers: ‘done with’ rather than ‘done for’ them. In this context, rural dwellers are viewed as undifferentiated members of the community who ‘adapt’ to defined resource and institutional settings (Jean, 2014).

The importance attached in rural innovation policy to understanding innovative activity from the point of view of local actors acquires particular relevance in the context of the changing demographic realities of rural areas. This is because migration patterns may underpin the emergence of differential views among individuals. One new demographic trend, examined in the 1990s and 2000s² in the body of literature identified with the concept of urban-rural shift (Keeble and Tyler, 1995), involved in-migration from urban to rural areas of the US, the UK and continental Europe (Champion and Shepherd, 2006). This was explained in terms of the ability of rural areas to attract urban dwellers because of their desirable residential environment (Keeble and Tyler, 1995). This occurred alongside traditional rural-urban mobility (primarily in pursuit of higher education qualifications or work before sometimes returning to the countryside) (Laoire, 2007). More recently, and under the liberal labour mobility rules of the EU, rural areas have benefited from the flow of new international arrivals. These changing demographics enable us to pose the following research question: *how are the meanings assigned to a rural area shaped by migratory discontinuities, and in turn, how do they influence rural innovation strategies (particularly regarding knowledge) and outcomes?* Our underlying objective is to explore implications for rural innovation policy.

In doing so, we will draw on the case of rural Cumbria, the synonymous English county excluding the towns of Barrow-in-Furness and Carlisle. This area offers a conducive setting

² This differed significantly from earlier (1980s) cost-based explanations for the urban-rural shift and its empirical association with ‘rural industrialization’: revolving around urban space shortages, operating cost differences, capital restructuring, and labour cost differentials (Fothergill and Gudgin, 1982).

for the purposes of our research: complying with past definitions of rurality (OECD) and commonly identified as such in spatial typologies (Hodge and Monk, 2004). Previous research indicates that there is innovative activity in the area (Kalantaridis and Bika, 2011), whilst rural Cumbria has benefited from in-migratory moves and return migration – particularly among practicing entrepreneurs (Kalantaridis and Bika, 2006).

Our study's contribution is three-fold. Firstly, it contends that place is neither independent and externally given, as is the case with the concept of the region, nor shared, as suggested in recent research by Parkinson et al. (2017). Instead, it is inextricably linked with the actor and the subjective experiences that s/he has accumulated through time: placing the active relationship between place and actor centre-stage. This is intuitively predictable, given the potential for differentiation on account of the diversity of migratory discontinuities, but theoretically unexpected. Secondly, it shows that the impact of immigrant, in-migrant or returnee entrepreneurs is not confined to pre-existing networks and contacts that enable access to distant knowledge³ resources – a one-off dividend of mobility. Instead, their subjective experiences and meaning assigned to place make their impact enduring, enabling them to introduce new and transient linkages in order to access distant tacit knowledge. Lastly, it questions some fundamental premises of policy thinking. This involves i) moving beyond the certainties of the region and its knowledge infrastructure towards knowledge resources that can be reconfigured and can stretch beyond individual enterprises and ii) questioning the relative contribution of rural dwellers, as a homogeneous grouping, and policy makers in the process of shaping action.

³ We adopt a broad definition of knowledge that includes both information (data that give meaning by reducing uncertainty, equivocation or ambiguity) and know-how (complex products of learning such as interpretation of information). We also differentiate between codified knowledge (that can be easily transferred from person to person) and tacit (that cannot be readily written or verbalised and thus it cannot be easily transferred).

The rest of the paper is structured as follows. The next Section explores the specificities of rural innovation and migration, and conceptually moves from ‘region’ to ‘place’ as the context of innovation. This is followed by a discussion of the data collection processes. Then we present the findings of our research followed by some conclusions.

The Literature

Rural Innovation

Research into rural innovation has attracted little scholarly attention to date, with only a small number of empirical studies and no coherent review of the literature. These studies show that, contrary to theoretical expectations based on the centrality of proximity and the region as the main spatial entity, enterprises located in rural areas often demonstrate success in introducing innovation. This is despite the fact that rural areas are defined by distance and weak knowledge infrastructure (Isaksen and Onsanger, 2010; Kalantaridis and Bika, 2011); offering precious few opportunities for local knowledge spillovers, and increased difficulties in accessing, particularly tacit, knowledge from non-local actors (Grillitsch and Nilsson, 2015). Moreover, rural enterprises operate under resource constraints (Singh et al., 2012), have less chance of achieving economies of scale than urban ones (Smallbone et al., 1999), and thus offer modest internal knowledge-generating capabilities. However, Patterson and Anderson (2003) show that accessible rural firms adopt a more innovation-oriented export strategy in order to counter the advantage of access to large local markets of their urban counterparts. Isaksen and Onsanger (2010) also argue that small urban and rural regions have a larger share than urban ones of innovating knowledge-intensive firms. Rather perversely, this provides support for those critical of rural innovation as a distinct area of policy, as ‘place is not a particularly important determinant of the extent to which firms perceive barriers to growth ... [and there is] little

support for the idea that rural firms face particular barriers to success ... [suggesting that] policy should not be targeted at rural firms' (Lee and Cowling, 2014: 40). This view is reinforced by research positing that rural SMEs do not perceive location as an obstacle to innovation (North and Smallbone, 2000).

Rural innovation performance has been explained on account of factors such as: the use of new technologies (Grimes, 2003) and the ability of rural enterprises to access extra-regional knowledge resources – which we will call hereafter *relational*, in order to differentiate from those that are rural specific (Isaksen and Onsanger, 2010; Kalantaridis and Bika, 2011). Invariably, existing research shows how new middle-class arrivals coming from urban areas, equipped with diverse networks of contacts, can act as conduits that strengthen the linkages between rurality and the global economy (Bosworth and Willett, 2011). Their move is often viewed as central in securing access to distant knowledge sources for rural innovation (Kalantaridis and Bika, 2006), and it is now accepted that they make a disproportionately positive contribution to the creation of new ventures and the incidence of innovation (Bosworth and Willet, 2011; Kalantaridis and Bika, 2011). There is however, little research exploring how new arrivals influence the ability of rural businesses to i) access tacit knowledge from distant resources (Boschma, 2005), particularly regarding market opportunities (Cornish, 1997), and ii) to exploit this type of knowledge during the crucially important early stages of the innovation process (Torre, 2008).

At the same time, existing literature stresses the importance of *rural resources* in influencing the nature of innovation. These resources often comprise a high natural resource content (Murdoch, 2000) as well as idyllic imageries and a traditional heritage that may be viewed positively by urban populations, driving demand for rural products (Milbourne, 2007). The

outcome is the advancement of innovations that are fundamentally revivals (in a new context) of tradition – such as organic farming and tradivations (Cannarella and Piccioni, 2011). This underpins the emergence of a ‘rural ethnocentrism’, which emphasises the importance of rural-specific resource mobilisation for the attainment of innovation.

These findings underpin an implicit dualism regarding the conceptualisation and policy actions for rural innovation. The argument that enterprises located in rural areas often demonstrate success in their innovative activities views rural innovation as being fundamentally similar to that taking place in other types of places (e.g. urban). It is ‘innovation in the rural’. In this intellectual setting, policy actions should focus on attracting more innovative types of entrepreneurs, i.e. invariably in-migrants or immigrants (DETR, 2000; Bosworth, 2006; Stockdale, 2006), and ensuring that rural enterprises are able to access distant relational resources. In contrast, the ‘rural ethnocentrism’ view conceives rural innovation as defined by the distinctiveness of the place within which it occurs: the natural resources, the heritage and imageries of an idyll. This conceptualisation aligns with policy actions stressing the importance of mobilising rural resources for success.

From Region to (Alternative Conceptualisations of) Place

The direction of policy action is influenced by the manner in which the context within which it occurs is conceptualised. Rural innovation policy calls for an understanding of rural innovative activity through the eyes of rural dwellers. However, and rather surprisingly, this policy discourse advanced more or less independently of debates regarding spatial context. Our paper takes a position in this debate, opting for the use of place instead of the region as the fundamental starting point in the development of a policy-relevant understanding of rural innovation.

The concept of the region, occupying a dominant position in research to date, constitutes an objectivist construct that has two defining characteristics. Firstly, it occupies a specific spot in geographical terms and by implication can be viewed in terms of proximity or distance in relation to other geographical spots (e.g. a rural region in relation to an urban-metropolitan one). Secondly, it has material form, both natural and built, for example in natural resources, people, physical infrastructure, and institutions (Habraken, 1998). Thus, it is viewed as an independent variable – like a host of other variables of this type including sector and the size of the firm. As a result, it is taken as given: an external determinant upon strategies developed by entrepreneurs in introducing innovation.

Place, instead, possesses three defining characteristics: ‘geographic location ... material form [like the region] [and] investment with meaning and value’ (Gieryn, 2000: 464-465). It is a specific spot in the world, embodied in built and social constructs, but also infused with meaning. Thus, a region becomes a place only when it is set in history or imagination, danger or security, identity or memory (Gieryn, 2000). Places are made by people as they assign meanings to material and social ‘stuff’ ‘not only materially carved out of space but interpreted, narrated, understood, felt and imagined’ (Gieryn, 2000: 465). People ascribe meanings to places: ours or theirs, public or private, new or old, proximate or distant. These meanings include not only various forms of knowledge and beliefs but also deeper, emotional and symbolic relationships between people and place (Williams, 2014).

The meaning assigned to place is viewed in the literature as the result of either collective processes or individual experiences. The majority of academic opinion, departing from a social constructivist position, focuses on the emergence of shared meanings of place: the outcome of

contestation (or negotiation) between groups engaging with place (Martin, 2003; Massey, 2005; Pierce et al., 2011). Pierce et al. (2011) capture this as follows: '[w]hile individuals may experience particular place-frames ... these frames are best understood as latent. As competing discourses about places are contested (and in their contestation, shaped and adopted by others), they become constitutive of new, shared place identities' (ibid: 55). This approach is also dominant in previous place-based research of rural development (Murdoch, 2000; and more recently in the Cumbrian context by Parkinson et al., 2017). Such a social constructivist place remains (like the objectivist region) externally given to the strategies developed by individual entrepreneurs in introducing innovation. However, it is not independent as it can be influenced by entrepreneurs indirectly through contestation. Only a minority of academic opinion adopts a subjectivist position in relation to meaning(s) of place. Within this intellectual setting, individuals are viewed as autonomous agents, who assign meanings to place using a scheme of interpretation that comes from their past and present experiences (Schütz, 1970; Tuan, 1977). These experiences can be both direct and personal, *and* they can be indirect and conceptual, mediated by common concepts, ideas, beliefs and practices held in communities, systems and networks. Here, the meaning of place cannot be taken as externally given, and should be mapped out in the context of the experiences of the individual actor(s) concerned.

The recognition that the meaning of place is pliable in the hands of different people either collectively or individually, opens up the scope for research into the emergence of distinct or even competing meanings of place. Migration in particular may shape the meaning of place as mobilities are 'more than just movements between locations; they are bound up with shifting meanings of ... places' (Milbourne, 2007: 382). Research in rural places views new arrivals and returnees as actors that challenge common conceptualisations of place that underpinned, historically, the formation of strong and homogeneous communities (Cheshire et al., 2013).

This positions migrants into drivers of transformational change, as new meanings of place (e.g. attractive or problematic ‘behind the times’ rurality) may shape their business activities (Bosworth and Willets, 2011).

However, the transformational role of migrants (on the meaning of place and innovation strategies) may vary depending on the adoption of a social constructivist or a subjectivist understanding. In a social constructivist context, this role diverts the emphasis away from shared meanings: focusing on adapting to or challenging boundaries (that result from pre-existing certainties) to innovation strategy and outcomes. ‘Adaptation’ (a key concept in the relevant body of literature) is a pragmatic entrepreneurial response to the divergence between individual and shared (and externally given) meanings of rural place (Murdoch, 2000; Parkinson et al., 2017). Challenging involves a process of social contestation that may be led by migrant, immigrant and returnee entrepreneurs (with potentially uncertain outcomes). On the other hand, a subjectivist understanding of place brings together entrepreneurs and place in a triangular process of innovation. Shaped by actors, subjective place influences but does not define innovation strategies as the influence of place is mediated by individual entrepreneurial experiences.

The choice between a subjectivist and a social constructivist understanding of place shapes both the direction and the nature of engagement in configuring policy action. A subjectivist view widens the scope for alternative and potentially differential types of action: as differential meanings attached to place by individuals may be producing distinct strategies that demand different policy actions. This necessitates an engagement of entrepreneurs in policy design that embraces the advantages coming from increased mobility, extending beyond creating start-ups to business model renewal. Interestingly, a social constructivist view narrows the scope of

action: on account of the existence of a shared meaning of place. Understanding the shared meaning of place can be attained through a more confined process of engaging entrepreneurs with policy. The latter avoids the criticism of “spreading investments thinly over unrelated areas” (European Commission, 2014), but at the same time imposes constraints on rural innovation strategies: defined by rural resources and shared meanings of place. It therefore neglects what might otherwise have happened on the basis of distant resources and individual entrepreneurial experiences in a less stable rural world.

Methodology

Data Collection

Reflecting the two elements of the research question, i.e. (i) rural innovation strategies and outcomes in place, and (ii) migratory discontinuities and the assignment of meaning of place, two methods were used. The first, like many previous rural innovation studies (Smallbone et al., 1999; Cosh and Hughes, 2003; Kalantaridis and Bika, 2006), involved a survey of innovative enterprises. Sectoral inclusivity was essential in capturing breadth (using the UK-Innovation-Survey 2012 for rural Cumbria for stratification purposes). Overall, enterprises were surveyed in manufacturing (29%); business services (23%); construction (15%); trade (9%); hotels-and-services (8%); agriculture (7%) and smaller sectors.

We were inclusive in the identification of enterprises for our survey using a number of commercial directories, databases and websites. Three screening questions were used in order to establish eligibility (i.e. that they were innovative in the eyes of the entrepreneurs). Subsequently, surveyed interviewees were asked to focus upon knowledge that was used in a specific process of product/service or process innovation and draw upon real events. Some 177

enterprises were contacted in order to achieve 110 valid interviews, giving us a response rate of 62%. This is viewed as very satisfactory if placed in the context of comparable studies (Smallbone et al., 1999; Kalantaridis and Bika, 2006). A structured interview schedule focusing on i) enterprise characteristics, ii) nature and processes of product/service innovation as well as process innovation, iii) output markets, iv) attributes of the entrepreneur, and v) enterprise performance was used.

In order to address the second element of our research question, we constructed cases through the conduct of in-depth interviews (in common with studies using the concept of place e.g. Massey, 2005; Pierce et al., 2011). Cases were drawn from the innovative enterprises surveyed and explicitly aimed at working backwards from events. The selection process was based on the following criteria: i) variety in entrepreneurial origin and type of innovation pursued ii) richness of the data in relation to the experiences of the innovative entrepreneur iii) balance between East (more prosperous and accessible) and West (formerly industrial and peripheral) Cumbria. The in-depth interview schedule included questions about ‘how’ and ‘why’ these rural entrepreneurs went ahead or not with innovations (focusing on causes-of-effects rather than effects-of-causes). Data (including interviews/financial reports/online newspaper records) were collected and analysed for a total of six cases, but only four cases are presented here for reasons of space and clarity. Each of these cases offers an opportunity to learn (Stake, 1994), and integrates context analytically into the explanation rather than simply using context (as a description) to enhance understanding (Welch et al., 2011).

Operationalising Key Concepts

In view of the changing rural migratory trends discussed in the Introductory Section of the paper, we adopt a more complex conceptualisation of migration than the dichotomous one

(locally-born and migrants) prevailing in the bulk of existing research. This included four types: i) locally-born (15% of the total), ii) returnees (28%), i.e. those who out-migrated (for study and/or work) and subsequently returned to the locality; iii) in-migrants (51%), those born elsewhere in the UK who moved into the area typically after many years of employment elsewhere; and iv) immigrants (6%).

Innovation is the outcome of strategies focusing on human, physical, financial and knowledge resources. This paper will explore knowledge strategies: partly because of the centrality of knowledge for introducing innovation (Florida and Kenney, 1993), and partly due to prevailing views regarding the weakness of rural knowledge infrastructures. In deciphering these strategies we will focus on four dimensions. The first revolves around the use (or not) of external knowledge sources: recognised as important in enhancing innovativeness (Chesbrough, 2003). The second will examine the type of knowledge transferred: i.e. tacit knowledge about market opportunities and codified knowledge about technological change (Cornish, 1997; Torre, 2008). Another dimension revolves around the geography of external linkages: differentiating between regional, national and international ones. Existing research indicates that short distances facilitate knowledge transfer and innovation (Grillitsch and Nilsson, 2015). The final dimension revolves around the strength of the external linkages: both in terms of durability through time and of frequency of the interactions.

We note that understanding innovation invariably revolves around two dimensions: type (product/service, process, organisational, market, and material) and degree. The latter is viewed as varying along a continuum of novelty (Ritala et al., 2015): from the regional level, involving improvement in products/processes that may draw insights from elsewhere (nationally or in terms of sector), to the international (radical developments in products/services and processes).

However, in the context of rurality, an additional dimension explored (influenced by the ‘rural ethnocentrism’ view) revolves around the introduction (or not) of innovation built on the distinctiveness of the place within which it occurs: this includes, as previously stated, the natural resources, the heritage and imageries of an idyll.

Data Analysis

The case study data analysis consisted of a series of steps (with the audit help of ‘peer debriefing’), searching for within-case similarities coupled with cross-case differences. As a first step, we thus coded the interview script data in terms of four key themes that are customarily encountered in the innovation literature: *innovative enterprise, networks of innovation, processes of innovation and innovation performance*. However, we felt that the addition of *entrepreneurial origin* as a fifth key theme would capture the background influence of social agents and the micro-dynamics underpinning innovations. In a second step we purposefully looked for and then came up with two overarching themes, which enabled us to take into account secondary data and collapse the previous five themes into a new narrative of rural innovation: *meaning of rurality and knowledge resource strategies*. This led to a final reordering of the case study data in order to develop a re-conceptualisation of *place-based innovation*.

Rural Innovation Policy Context

The abolition of regional development agencies by the UK coalition government and the pursuit of a localist agenda, which empowered communities to do things their way, opened-up the scope for policy-action in Cumbria. However, decision makers remained attached to an objectivist approach: focusing on the advancement of rural knowledge infrastructures that absorbed the bulk of the modest resource (13%) (Cumbria LEP, 2014a) dedicated to

innovation. This is because, in an orthodox manner, the knowledge generation capabilities of the study area are viewed as limited to a handful of ‘rooted by mission’ and large organisations. These included the University of Cumbria and the National Nuclear Central Laboratory at Sellafield, which also includes an outpost of the University of Manchester Dalton Nuclear Institute. The position of the latter alongside the West Lakes Science and Technology Park, a sizeable concentration of enterprises in the nuclear industry, is viewed as a central policy concern. This, together with an emphasis on supply chains led by major local enterprises, leads to a narrow direction of policy action aimed at two industrial contexts: expectedly the agro-food industries (common across many rural settings) and nuclear and environmental ones constructed around knowledge resources linked with the nuclear station located in Western Cumbria (Cumbria LEP, 2014a). This view is inherently ‘rural ethnocentric’, focusing on (objectively recognized by policy-makers and externally given) key assets of rurality (agricultural land and a well-established industry built on account of low population densities). Here, policy makers reconfigure interventions sensitive to the rural context that are ‘done for’ Cumbrian entrepreneurs whose “micro innovative responses to macro change” are largely ignored (Stott and Tracey, 2018: 7). Corporate knowledge resources in Cumbria (e.g. Pirelli, GSK, Innovia Films, Siemens Subsea), which represent local capacity to research and develop products, are also ignored. This conservative view, is revisited in the recently launched (late 2018: 7) consultation of a Draft Local Industrial Strategy for the county “to become a world leader in the way people, goods and services move” by Cumbria LEP.

This view is not divergent from the wider UK policy context. Specifically, the recently published Industrial Strategy (2017: 227), even though dealing explicitly with place (in the context of localism), does so in an inherently objectivist and externally given manner, whilst heavily influenced by spatial proximity considerations and the ‘clustering effect’. It

acknowledges that ‘Local Industrial Strategies ... will be developed locally and agreed with government’ (ibid. p. 220). This understanding of place may be on account of the, admittedly implicit, top-down perspective (‘done for’) of the UK Industrial Strategy, approaching places fundamentally as oddly shaped and interlocking pieces of a national jigsaw puzzle. As a result, the UK Industrial Strategy fails to consider the complexities of place, and totally disregards rurality as a distinct context for policy action. Instead, rural areas, towns and cities (together) are viewed as having ‘distinct comparative advantages ... [meaning that] ... different policies will be needed for different places’ (ibid. p. 217). However, it also places emphasis on the advancement of sustainable agriculture and the nuclear industry, aligning well with policy action locally.

Types of Migratory Discontinuity and Meaning of Place

Our survey shows that types of migratory discontinuity are linked with differences in entrepreneurial and enterprise characteristics. Not unexpectedly, given the fact that they lived all their lives in rural Cumbria, only 14% of locally-born entrepreneurs possess higher education qualifications: in contrast to 83% among immigrants. However, in the case of the latter, qualifications are rarely aligned with the industrial sector of their ventures. This disconnect, combined with the fact that business start-up occurred soon after relocation in the locality, indicates that entrepreneurship of this type may be linked with limited employment opportunities elsewhere. Returnees and in-migrants are educated to degree level or above at 50% and 64% respectively. Innovative entrepreneurship appears to be male dominated. Females account for 25% of in-migrants, one in five for returnees and locally born, whilst they are non-existent among immigrants. There is significant disparity regarding business inheritance: reported by 40% of locally-born and 7% of returnee entrepreneurs, but (as

expected) being non-existent among the other two types. This, in turn, influences the sectoral characteristics of the enterprises run by those locally-born, who are involved heavily in traditional pursuits: construction (31%) and agriculture (19%). In-migrants engage in manufacturing (35%) and business services (32%), whilst immigrants overwhelmingly run manufacturing firms.

These disparities are also reflected in the qualitative cases selected (Table 1). Peter, an exemplar of a locally-born entrepreneur, was born in West Cumbria and spent “all (his) childhood in helping out (his) father” with the family farm. He became a partner in the business in 2000 (aged 24), and took over in 2006. John, a returnee entrepreneur, was born locally, and went to Liverpool in order to study architecture and gain work experience in a national building company. Upon his return to Cumbria (1970s) he took over a fifth-generation family business (now, 14 employees). Nicholas was born elsewhere in England, and became involved in height-related sports during university. For the next eight years he had a lifestyle that combined climbing as a hobby with cash-in-hand jobs. However, it was his subsequent work as an industrial abseiler in the London window-cleaning industry that directly marked the transformation of his hobby into a commercial activity. His wish to be close to nature prompted him to move to Cumbria in 1992. He left his sales job in an outdoor equipment distributor company together with his future wife and another employee for this start-up in 1997 (now, 57 employees). Lastly, Reza, an immigrant entrepreneur, studied physics in Iran, and subsequently left ‘home’ for a postgraduate degree in Germany. There he met his future wife, whose place of origin is Cumbria. He moved to the area in 1999, enabled by his status in another EU country, and worked in restaurants. In 2005 he launched (in partnership with a co-ethnic former employer) his first food outlet. Financial difficulties prompted this immigrant to move into business on his own, and with money borrowed from his sister in Iran, he has since 2010 been

running an Italian restaurant that sells food cooked in a wood-burning stove and has high customer service standards (now, 4 employees).

The meaning attributed to place differed significantly between these four cases. Reza, advanced the most positive meaning of place, buying-in to its idyllic connotations: “I came here and I saw it, this is why I stayed ... I always loved to live somewhere quiet”. This meaning is in relation to him as an individual, avoiding “feeling like a stranger” (he thus purposefully buys from local shops), rather than as a context/setting for innovation in his business. Whilst also inherently positive, Peter’s view is subtly dissimilar to that of Reza. For this locally-born entrepreneur, living in Cumbria was never in question as it is his home. However, and unlike immigrant Reza, he was explicit in acknowledging the business-related resource implications of place. This the case regarding farm labour availability issues, as “we have to benchmark ourselves with the biggest local employer [Sellafield] and the wages they pay”. His awareness of resource implications was also apparent regarding transportation costs (“as long as ... we have got somebody here to purchase our produce”), land prices (“well there are financial reasons in moving farms”) and the absence of regional government subsidies for farmers, in contrast to Scotland.

A more nuanced meaning emerges in the case of John. Lifestyle choices underpin venture location in the sense of “our business is here because we want to live here ... this is home ... I wanted to bring my children up here”. However, this returnee also recognises that Cumbria for those “who have come in from outside, is a museum”. This is viewed, not as a disadvantage, but as malleable, as shown in the new management structure that has become John’s answer to the local suppliers’ unwillingness to engage in multitasking or efficient co-ordination of building activities. He states “at some point our fathers decided right, we may as well have our

own joiners here ... take the whole shooting match on ... because we couldn't get [them] to work”.

This is very different from the meaning articulated by Nicholas, who suggests that “to innovate in Cumbria is exhausting”. This in-migrant entrepreneur goes on to argue that “you can end up in a small geographical area, and it can give you quite a small perspective on some things. I don't think Cumbria is a very outward looking place ... people aren't thinking oh now I have developed my initial skill what can I do now”. This makes him embrace an innovation strategy that finds strength in self-direction and autonomy: “we are very sort of self-contained ..., so for quite a number of things we actually have the answer rather than the question”. An exasperated view of place and its changing corporate knowledge resources (e.g. “there was a (good) manufacturing resource locally ... whilst “if we advertise locally for an IT programmer we get no decent applicants, this is when operating a company like this from Cumbria is madness”) leads him to engage in divergent radical thinking.

Implications for Innovation Strategies

The apparent differences in the meaning assigned to place by entrepreneurial actors are reflected in the innovation strategies deployed (Table 1). Nicholas' in-migrant ability to (relatively) detach himself from the 'disadvantageous' place enables him to combine 'thinking' innovation in terms of “a global opportunity for what we do” with 'doing' innovation as the experience of constructing things oneself (“we stitched together a safety harness that we thought would work”). Local detachment allows the exploration and exploitation of innovative alternatives: whilst experiences of living and working outside Cumbria facilitate the establishment of a vital outside (relational) link through both new and old customers, invariably

located elsewhere in the UK or abroad, which allows access to tacit-type of knowledge about market opportunities.

Insert Table 1 about here

The more nuanced meaning returnee John attaches to Cumbria enables him to combine knowledge about new technological advances, which was invariably codified, from outside the place with tacit knowledge about local market opportunities. In this case, codified knowledge through relational resources is central at providing differentiation (experimenting “material wise”) aimed for the Cumbrian market. Being vigilant to changes introduced in the national supply chain, which often includes new and transient participants (“you keep your eyes open”), allows him to exploit relevant local gaps incrementally “bit by bit (just working on it)” in attaining this knowledge.

Of particular interest is locally-born Peter’s sympathetic view of rural Cumbria, which is more-or-less engrained in the very nature of his long-running family venture. His innovation aimed to resolve a very ‘place-specific’ challenge (i.e. labour availability in a market dominated by Sellafield), triggered by the retirement from farming of his parents. Codified knowledge gained during his study at the regional agricultural college (Table 1) was important: “you get to see how other (technological) systems operate”. His wife, a chartered accountant, helped him to come up with a formal business plan (thus a bank loan), and outside help, such as other (local) producers’ tacit knowledge (“how they found it [the new technology] worked on their farms”) were actively sought regarding the exploitation side of the innovation. Additionally, regular fortnightly contact with his local salesman was kept throughout the process of installation.

Reza demonstrates a need ‘to belong’ and a sympathetic view of the place like Peter. However, in the case of the immigrant entrepreneur this view is individual and devoid of a meaning of place as context for business: thus failing to translate into the deployment of rural knowledge infrastructures in the innovation process. He innovates using codified knowledge from personal connections from outside the place that were transformed into business linkages after he got involved in business venturing. He states that “an Iranian friend in America who used to be here (had a business in Cumbria) ... sold me this wood-burning stove ... my sister (living in Iran) is an architect and I asked her to draw it in 3D for me”. Reza spoke many times per month with these key actors during installation (Table 1) of this innovation.

Differences in the innovation strategies identified in the case studies are also supported by the findings of the survey. This shows that innovation is the outcome of extensive use of external (to the firm) knowledge resources, particularly in the case of locally-born and returnee entrepreneurs. In both these types, three quarters or more (up to 90%) use external sources of knowledge for both idea generation and implementation in both product/service and process innovation. Knowledge sources located within Cumbria are accessed mostly by locally-born and returnee entrepreneurs, aligning well with their main output and input markets (Table 2). This revolves primarily around knowledge about market opportunities (100% of the former and 67% of the latter type of respondent) and could be linked with their personal experiences. This differs significantly, when compared with in-migrants and immigrants: both of these groupings rely less (below half of cases) on external knowledge sources for idea generation and implementation. Moreover, entrepreneurs falling in these two groupings use less rural and more relational knowledge resources (based nationally and internationally) than those locally-born and returnees (see Table 2). This aligns well with the fact that they serve distant markets (Table 2). In the case of in-migrants (44%) knowledge about market opportunities (and

technological knowledge) comes through these relational sources, whereas immigrants access only technological knowledge this way. This indicates, at first glance, the differential influence that their experiences exerts on their ability to access both tacit and codified types of knowledge from (primarily) national and international resources.

Insert Table 2 about here

Not unexpectedly, distance influences adversely the aggregate frequency of interactions between entrepreneurs and sources of knowledge. All rural entrepreneurs interacted 9.3 times per month with regional sources of knowledge, in comparison to 7.1 times with those based nationally, and just 3.4 with international ones. This, combined with the geographical breakdown of sources of knowledge used by entrepreneurs of different types (Table 2), underpinned an expectation of differences in the frequency of interaction between locally-born and returnees who rely more on nearby sources of knowledge, and in-migrants and immigrants who use distant ones to a greater degree. This was only partially confirmed by the data. Locally-born entrepreneurs reported more than twice the average aggregate frequency of interactions of immigrants, 12.9 and 6.4 times respectively. However, the latter interacted more frequently with knowledge sources than returnees (5.4) and in-migrants (5.8). This immigrant ability cannot be explained in terms of the durability of relationships. This is because they report that relationships with key sources of knowledge go back just 1.9 years from when the idea was conceived: indicating that these are new, potentially transient, formed subsequently to the migratory move. This aligns well with the fact that immigrants appear to be pushed into entrepreneurial pursuits (thus not being well endowed with networks from their places of origin), and may explain the fact that they access invariably codified technological knowledge

from distant sources. This compares with 5.3 years for in-migrants, 7.1 years for returnees, and 8.1 for locally-born entrepreneurs.

Rural Innovation and Policy Considerations

In this Section we return to the issue raised within the ‘rural ethnocentrism’ argument (and its implications on policy) regarding the importance of the rural character of innovations. Overall, only a minority of innovations (20%), both product/service and process, are linked with rurality. Not unexpectedly, given the meaning they attach to place and its centrality in mobilising rural knowledge resources, locally-born entrepreneurs more commonly (one in three) suggest that they introduce rural innovations. This may be linked to product/service, for example protected status foodstuff, or process change. The latter is apparent in the case of Peter, who introduced a milking robot in response to labour shortages. One in five returnees also introduce innovations linked with rurality: as is apparent in the case of John, whose innovation revolves around the conservation of the rural built environment. This figure is modestly below that reported by in-migrants: Nicholas introduced ‘innovation in the rural’ – having created a safety harness for rescue teams that received a national innovation award. Innovation linked to rurality is non-existent among immigrants. In terms of the degree of innovativeness, on aggregate radical change is reported twice as commonly among innovations that are not linked to rurality (33%) as those that are (16%). In the case of in-migrant entrepreneurs, their relative detachment from place and ability to pose fundamental questions about how existing products/services/processes operate mean that there are virtually no differences in the incidence of radical innovation between ‘rural innovation’ and ‘innovation in the rural’ (33% and 30% respectively). This is in sharp contrast to locally-born entrepreneurs, where there are no instances of radical change in innovations linked with

rurality. Thus, the innovation basis of rural Cumbria is broader than that envisaged either by advocates of a ‘rural ethnocentric’ or ‘innovation in the rural’ approach.

This innovation basis is not well-supported by the narrowly ‘rural ethnocentric’ direction of policy (Cumbria LEP, 2014 a and b). Rural knowledge infrastructures, such as research laboratories and universities and key industrial sectors, namely agro-food and nuclear and environmental, viewed as important by policy-makers, are relevant for only a minority of enterprises. Thus, new policy direction should be sought in leaving behind the binary divide in policy action between ‘rural innovation’ and ‘innovation in the rural’, and pursuing policies of diversification that support the broad range of innovation strategies and outcomes reported by rurally-based but heterogeneous entrepreneurs.

A key consideration in new policy action is the disconnectedness of knowledge resources used by rural innovators. Rural knowledge infrastructures, identified by policy makers, are not widely used in introducing innovation by entrepreneurs. However, this is also the case for the corporate knowledge generating capabilities in Cumbria (such as those identified earlier in the paper). Instead, the entrepreneurs at the focus of our research work with a multitude of relational, and often transient (as is the case with immigrants and to a lesser degree in-migrants) knowledge resources located at a distance. These knowledge resources are linked with individual enterprises and do not diffuse more widely. Thus, policy should focus on facilitating access to both tacit and codified knowledge coming from both rural and relational resources through long-established and (very interestingly) new linkages and supply-chains. Actions aimed at enhancing physical/digital connectivity, such as road and rail improvements, and broadband and mobile coverage, (interestingly included in the Draft Local Industrial Strategy currently under consultation (Cumbria LEP, 2018) may contribute positively in this direction.

However, these must be complemented by actions that facilitate place-based knowledge flows and augment innovation impact *beyond* the confines of individual enterprises. This could involve offering supply chain and logistics development support, as well as the development of entrepreneurial peer-to-peer learning groups (across different sectors). The development of inclusive and permeable social infrastructures (Ring et al., 2009) is important for the advancement of an alternative paradigm to that of spatial clustering and ‘anchor’ institutions. This could involve building on relationships both within and beyond the boundaries of the rural place, formed by a multitude of actors using overlapping memberships to different places (Ho et al., 2015).

The range of actions necessary to support the broad innovation basis identified in our paper cannot be (on account of the modest resources available as shown in the third Section of our paper) be supported solely through rural innovation policy. Instead, the latter should be developed in the context of policy actions taken at different, and often higher, geographical scales. For example, a minority of Cumbrian entrepreneurs could draw gains from actions included in the UK Industrial Strategy, at the national level, aimed at the nuclear and the agro-food industries, in the same manner as Nicholas benefited from winning a British product innovation award.

Broadening the direction of policy action can be achieved only through a shift in the nature of engagement with policy away from both the top-down approach adopted by the UK government, as manifested in the Industrial Strategy, and the ‘done-with’ view coming from advocates of rural innovation policy: united in their view of rural communities as coherent collectives (OECD, 2014; 2018). Instead, we argue, it is critical to not only acknowledge but also *use* heterogeneity within rural communities. This requires that the process of policy

development is ‘done by’ entrepreneurial individuals (Stott and Tracey, 2018). Specific actions that could facilitate this include participation of smaller entrepreneurs spanning across the sectoral spectrum in the governance of the Cumbria LEP and the potential development of a Chief Engagement Officer role to offer terrains for rich interactions and facilitate contestation in policy development.

Of particular interest regarding heterogeneity are the implications of the decision to leave the EU. It poses the immediate question of whether this may lead to a reduction of immigration or its re-composition to include more arrivals (with very different experiences) from elsewhere in the world (and thus new meanings of place and linkages), but also directs the focus of policy action on migration as central to rural innovation. Actions that aim at the broad range of mobilities including returnees (such as entrepreneurial resettlement privileges that provide access to commercial buildings, skill share schemes, grow-on premises, flexible work spaces), in-migrants (including place marketing, such as the recently launched ‘Rockies of the UK’ vision for Cumbria) and immigrants (focusing particularly on visa arrangements that are more favourable than those of urban settings) (Ho et al., 2015; Cumbria LEP, 2018; Phillipson et al., 2018). Such policy-making takes into account the inflows, outflows and backflows of entrepreneurial actors in place-based innovation beyond the individual enterprise.

Conclusions

Our paper, drawing on empirical insights from the context of rural Cumbria, has shown that the meaning of place is neither independent and (externally) given, nor shared, i.e. mediated by common concepts (the result of past contestation/negotiation) but still given to all. Instead it is differentiated by individual (entrepreneurial) experiences. Thus, in the cases presented here

there are significant differences (on account of migratory discontinuities) as to whether rural Cumbria as place is positive or negative, and if this meaning relates to the individual or the business. Here the unravelling of differential meanings of place appears to challenge views about a shared (social constructivist) meaning of place (as a result of the multiple population mobility trends). More positively, our evidence supports the merits of a subjective understanding of 'place', an individually experienced construct often formed following relocation, which could influence prevailing understandings of rural innovation strategies (Patterson and Anderson, 2003; Isaksen and Onsanger, 2010; Kalantaridis and Bika, 2011; Lee and Cowling, 2014).

More specifically, what matters for enterprises is not only accessing relational, and thus distant, resources (reiterated by Cumbria LEP's latest consultation, 2018) through pre-existing migrant entrepreneurial networks, but also the ability to establish new linkages, which may at times be transient. These enable access to codified (immigrants) and tacit knowledge (in-migrants) and divergent use of this knowledge. Use is influenced by their relative detachment (as is the case with in-migrants) or differentiated attachment to an inherently positive place (as is apparent among returnee, immigrant and locally born entrepreneurs). This (detachment or differentiated attachment) may also influence the ability of entrepreneurs to introduce radical innovation linked with rurality. Moreover, there is apparent differential mobilisation of rural knowledge infrastructures (for both codified and tacit knowledge), even among entrepreneurs possessing a positive (but not identical) view of Cumbria. These ultimately support a shift towards a non-binary (rural innovation vs. innovation in the rural) understanding of innovation strategies (and their variation): with consequences both for our understanding of i) rural place, rural enterprise and rural innovation and ii) policy action.

In our intellectual context, the meaning of rural place is assigned by actors actively engaged with it and it is not defined externally in terms of locational and/or resource considerations as is the case with most prevailing conceptualisations. Thus, it cannot be viewed in abstract terms but only through the eyes of rural dwellers. Moreover, rural place does not exist in isolation from but is closely interwoven with other (distant urban and or international) places as shown aptly in our paper. As a result, rural enterprises are entities constructed by entrepreneurs upon their own meanings of place and connected, though entrepreneurial actions, with distant places with the aim of realising the innovation strategies deployed. Innovation is an outcome that may be pursued by strategies deployed by rural entrepreneurs. Thus, rural innovation, as is understood in our work, is a shifting phenomenon to be studied and understood ‘in context’ and at different types of organisations (e.g. SMEs, multi-sectoral, non-technological) rather than a pre-existing concept that is already defined based on input factors (e.g. R&D) or outcomes (e.g. patents) (Gamito and Madureira, 2019).

The implication of this pluralist understanding of rural innovation is the pursuit of policies supporting diversification. The latter involve a move beyond clustering around rural knowledge infrastructures to the development of connections *between* innovation networks combining rural and relational, at times transient and new knowledge resources: a way of ‘open-sourcing’ the diversity reported by individual entrepreneurs on account of ongoing personal experiences of moving across places, jobs and organisations. For example, those of family entrepreneurs, owner-managers, migrant entrepreneurs or corporate entrepreneurs who have had heterogeneous entrepreneurial journeys, but carry out their different economic activities in the rural and can benefit from each other’s knowledge portfolio. This adds a new meaning to personal mobility, itself reshaped following withdrawal from the EU, beyond the provision of entrepreneurial talent and pre-existing networks to an enduring driver of rural innovation.

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Table 1. Case Studies and Dimensions of Innovation Strategies

	Peter	John	Nicholas	Reza
Entrepreneurial Origin	Locally-born entrepreneur	Returnee entrepreneur	In-migrant entrepreneur	Immigrant entrepreneur
Age	37 years old	57 years old	51 years old	37 years old
Education	Technical College Graduate	University Postgraduate	University Graduate	University Postgraduate
Business Size	No employees	14 employees	57 employees	4 employees
Industrial Sector	Agriculture	Construction	Manufacturing	Restaurant
Innovation Type	Process	Product/Service	Product/Service	Product/Service
Use of external knowledge	Yes, for the implementation of the innovation	Yes, for both idea generation and the implementation of the innovation	Yes, for the implementation of the innovation	Yes, for the implementation of the innovation
Type of knowledge transferred	Codified type of knowledge about alternative technologies	Codified type of knowledge about technology & tacit regarding markets	Tacit type of knowledge about customer needs	Codified type of knowledge about new technology
Geography of external linkages	Regionally and nationally	Nationally (codified) and regionally (tacit)	Nationally and Internationally	Internationally
Strength of external linkages: average contact frequency & durability	Twice per month (with suppliers located regionally); Linkages going back five years	Once per month (with suppliers located nationally); Linkages going back ten years	Twice per month (with customers located abroad); Linkages going back five years	Many times per month (with suppliers located abroad); Linkages going back ten years

Table 2. The Geographical Origin of Knowledge Sources used for Product/Service and Process Innovation implementation (in percentages)

	Locally-born (1) [2]	Returnees (1) [2]	In-migrants (1) [2]	Immigrants (1) [2]
Enterprises using knowledge from Cumbria	(43) [40]	(43) [60]	(35) [0]	(0) [0]
Enterprises using knowledge from elsewhere in the UK	(57) [40]	(57) [40]	(55) [83]	(60) [0]
Enterprises using international knowledge	(0) [20]	(0) [0]	(10) [17]	(40) [100]
Enterprises using knowledge from national sources that also sell elsewhere in the country (2008)	75	50	88	100
Enterprises using knowledge from international sources that also sell internationally (2008)	N/A	N/A	100	0
Enterprises using knowledge from national sources that also use national non-labour inputs (2008)	100	100	100	100
Enterprises using knowledge from international sources that also use international non-labor inputs (2008)	0	N/A	100	50

(1) Product/Service innovation [2] Process innovation