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Virtual reconnection: The online spaces of alternative food networks in England



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ABSTRACT

Spaces of 'alternative' food production and consumption have been the subject of considerable interest within agri-food research and policy-making circles in recent decades. Examples of these Alternative Food Networks (AFNs) include Farmers' Markets, Community Supported Agriculture (CSA) schemes and farm shops, where food products are embedded with social and spatial information that serves to differentiate them from conventional agri-food systems. These shorter, more transparent, localised supply chains that characterise AFNs are underpinned by the notion of reconnection – a fundamental set of biological, social and moral processes that enable agri-food stakeholders to participate in ethically minded, transparent systems, where they are better connected to one another and to the markets and environments in which they are immersed. Drawing on a range of eight AFN case studies in England and using a multi-method approach, we explore the notion of reconnection within online space to show how social relations have changed, and are changing as a result of online activity. In examining the websites and social media platforms of AFNs and primary data collected from the creators and users of these spaces, we uncover the notion of 'virtual reconnection'. We found the embodied, socio-material reconnection processes that occur *in-place* also occur online. However, by extending AFN spaces, virtual reconnection cannot fully replicate the same embodied and tactile experiences associated with the material spaces of AFNs. As such, online spaces in the context of AFNs provide a useful additional realm for reconnection, but need to be understood as supplementary rather than as a substitution for socio-material reconnections. Future research should consider the moral dimensions of reconnection and the capacity that online spaces have for enhancing the inclusivity of Civic Food Networks (CFNs), and their transformative role in contributing to more sustainable behaviours.

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1. Introduction

Interest in the spaces of 'alternative' food production and consumption within agri-food research and policy-making circles has increased in recent decades, this is "in part a consequence of consumer reactions to a range of environmental, ethical, and health concerns which are associated with 'conventional' food supply systems that have become increasingly industrialised and global in reach" (Ilbery and Maye, 2005: 823). Indeed, the horsemeat scandal¹ was a recent high profile incident that raised concerns with the

state of food systems, heightening public and political anxiety about the transparency and authenticity of elongated, conventional food supply systems that exist across Europe and beyond. Along with undermining consumer confidence in the familiar products that populate supermarket shelves, such incidents highlight how complex systems of food provisioning serve to distance and disconnect consumers from the people and places involved in contemporary food production (Kneafsey et al., 2008). As a result there has been an interest in alternative modes of food provision, which aim to 'reconnect' consumers, producers and food (Renting et al., 2003; Holloway and Kneafsey, 2000; Sage, 2003).

Drawing on the concept of reconnection, we explore the role of online space in relation to the biological, social, and moral dimensions of reconnection (Dowler et al., 2010; Kneafsey et al., 2008). Studies connecting agri-food spaces and networks to online spaces are becoming more necessary as the mediums used to

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¹ Horse meat was found in a number of beef products, sold in UK supermarkets in 2013, which raised concern over food safety and transparency of the food chain.

access the Internet have developed significantly over the past 20 years with technological advancements enabling a 24/7 connected culture. Online and social media account for a large proportion of contemporary Internet-based activity and play an important role in organisational image construction, and in the relationships and experiences of individuals. Such a rapid change has seen over 70% of online adults access social networking sites in 2014, and Facebook listed as the fifth single most popular online activity in 2013 amongst UK adults (Ofcom, 2015; ONS, 2014). Furthermore, nearly half of UK businesses made use of social media in 2012, with the main reasons being to develop business image, market products and to obtain or respond to customer opinions (ONS, 2012).

To understand the impact and implications of technological advancements in the context of agri-food research, 'reconnection' – an underpinning concept to Alternative Food Networks (AFNs), must be at the heart of this endeavour. As such, we aim to explore the ways processes of reconnection are mediated and manifest in a virtual capacity, and to consider how this is related to material connections. To do this we conducted a mixed method, empirically rich study incorporating eight AFN case studies and 21 online spaces, reflecting the range and complexity of new metamedia.² Key findings are presented in five main sections incorporating: AFNs' use of online and social media (including how customers and members use it), biological, social, and moral connections, and the importance of place and context. Drawing on the nuances of how different AFNs use online space, the paper concludes by introducing the concept of 'virtual reconnection' which should not be regarded as a substitution for the socio-material reconnections that arise *in place*. Finally, future research questions are proposed which include an exploration into online and offline interactions and relationships, the transformative potential and moral aspects of virtual reconnection.

2. Contextualising alternative food geographies

The growth in AFNs during the late 1990s and early-mid 2000s is evidence of producer and consumer responses to the 'murky' and unsustainable food systems that are increasingly failing to satisfy the needs and demands of food producers and consumers alike (Sage, 2013). Examples of these AFNs include Farmers' Markets, farm shops and farm gate sales, Community Supported Agriculture (CSA), box delivery schemes, producer and consumer co-operatives, and community gardening initiatives (Jarosz, 2008). These types of food provisioning systems are markedly different to conventional counterparts as they can redefine and shorten relations between producers and consumers through transparent short(er) food supply chains (from here on referred to as Short Food Chains – SFCs); these shorter chains are founded upon quality and provenance and point towards more sustainable modes of production (Marsden et al., 2000; Renting et al., 2003; Sage, 2003; Goodman, 2004; Ilbery and Maye, 2005; Morris and Kirwan, 2010).

These re-localised SFCs that characterise AFNs invite critical insight into the relationships and transactions that take place from the point of production to the point of sale as they are characterised by shorter physical distances between producer and consumer (geographical proximity) or fewer intermediaries or 'links' in the chain (social proximity) (Aubry and Kebir, 2013; Kneafsey et al., 2013; Renting et al., 2012). While geographical distance is implicit in the term 'short', a defining feature of SFCs pertains to the embeddedness of social relationships that enables value-laden information such as provenance to be communicated between actors

from farm to fork (Ilbery and Kneafsey, 2000; Kirwan, 2006; Renting et al., 2003; Sage, 2003). This reduction of social and geographical proximity ultimately enables producer–consumer relationships to be 'thickened' (Whatmore et al., 2003; Eden et al., 2008), in contrast to the disembedded conventional systems that have served to disconnect rather than reconnect people to their food.

However, more recently, the AFN concept has proved problematic due to the polarised distinction from conventionalised food systems. While the term AFN offers a useful, heuristic conceptualisation (Holloway et al., 2007), a distinctive alternative-conventional divide rarely exists in practice (Ilbery and Maye, 2005). As such, AFNs are situated alongside and operate within conventional systems and market logic. Given this hybridity, AFNs have been unable to coalesce around any consistent, normative content of their own (Renting et al., 2012) and are often defined in relation to what they are not, rather than what they are (Tregear, 2011) which can instantly marginalise them and risks normalising adverse 'conventional' practices (Seyfang, 2006). Similarly, it is necessary to regard alternative stakeholders less in a fixed, dualistic sense and appreciate the different agendas, interdependencies, and synergies that are implicit throughout agri-food systems (Lamine, 2015).

Current scholarship is increasingly interested in going beyond alternative debates toward addressing matters of food system governance, community participation, social entrepreneurship and grassroots innovations (Grasseni, 2013; Kirwan et al., 2013). As such, the role of civil society and communities has become an important focus in understanding and developing transformative food systems (that have emerged since the 2008 food crisis) and are situated less in regional development and instrumentalist discourse (Hinrichs, 2000), and more in notions of justice, control and food sovereignty (Lamine et al., 2012; Renting et al., 2012; Shawki, 2012; Goodman and Sage, 2014; Sage, 2014). The Civic Food Networks (CFNs) concept has been proposed as a way to move beyond the debates associated with alternative and to bring to the fore the role that citizens play in (re)shaping and reclaiming food systems (Renting et al., 2012).

2.1. Contemporary agri-foodscapes

It has been argued that CFNs provide a complementary category to existing AFN knowledge and definitions that enable alternative food system relations and governance at the community-scale to be theorised (Renting et al., 2012). Indeed, a key attribute of CFNs is that they open up possibilities to explore progressive social change moving away from debates around alterity and producer routes to markets (Marsden et al., 2000; Renting et al., 2003). Furthermore, a decade-long understanding of alternatives from this prevailing neo-liberal stance has enabled larger-scale mainstream retailers to gradually capture or assimilate the ethical and aesthetic qualities of local AFNs (often under their own branding), which can threaten social projects and the transformative ambition of 'alternative' food movements (Goodman et al., 2012; Lutz and Schachinger, 2013).

Situating alternative food practices as part of a broader transition movement towards a more resilient future may provide a way to alleviate the impasses associated with the market framings of AFNs (Sage, 2014). This is because CFNs are defined by the active role citizens play in the "initiation and operation of new forms of consumer–producer relations" (Renting et al., 2012: 290). It is argued that CFNs include more participatory and collective forms of organisation (such as consumer co-ops, solidarity buying groups and collective urban gardening initiatives) viewed as community-scale approaches attempting to (re)shape, (re)claim and challenge the broader prevailing food system. This reflects the role of civil

² Used by Marshall McLuhan (1964) and refers to new relationships between form and content in the development of new technologies and new media.

society in contemporary agri-food dynamics and (new) governance structures that go beyond moral consumerism alone (Renting et al., 2012; Brunori et al., 2012; Lutz and Schachinger, 2013; Anderson et al., 2014; Sage, 2010). Whilst this approach progresses analyses beyond producer–consumer dualisms (Tregear, 2011; Reynolds, 2012), this observation is not entirely new; the blurring between producers and consumers, and their motivations, was found to occur through a process of entanglement within some AFNs (Venn et al., 2006; Kneafsey et al., 2008). Whilst it is not the aim of the paper to critically unpack and examine the CFN concept, it does acknowledge the shift regarding the way AFNs are conceptualised and draws on this emerging framework to offer some further insights into how it can be applied to AFN activities. Attention now turns to how alternative agri-food relationships are socially and spatially (re)embedded through the process(es) of reconnection.

2.2. Reconnection

Underpinning AFN-related concepts is reconnection, which has been synonymous with place based, alternative food initiatives in the UK.³ In the broadest sense, reconnection can be defined as “bringing together of different elements of the food system” (Dowler et al., 2010: 205). It is the process(es) that enable agri-food stakeholders to participate in ethically minded, transparent systems, where they are better connected to one another and to the markets and environments in which they are immersed and depend on. Reconnection has been used within the context of AFNs, civic agriculture and local food systems as a critical process through which embeddedness and arguments about sustainability gravitate (Lyson, 2004; Watts et al., 2005; Kneafsey et al., 2008; Morris and Kirwan, 2010). Applied at different scales and utilised in various ways, reconnection is regarded as a central restorative process in the strengthening and consolidation of place-based, regional food systems (Kneafsey, 2010).

Reconnection also constitutes various inter-related dimensions as identified by Dowler et al. (2010) – the biological, social and moral. These distinctions reflect how CSAs and direct selling initiatives across Europe enabled citizens to become attuned to natural and biological cycles such as seasonality, which has become a somewhat defunct and absent feature of conventional agriculture and modern consumerism. Social reconnection refers to the trust building, reciprocity, and social embeddedness of relationships that arise within AFNs, with moral reconnection relating to the broader transformative capacity that such spaces and initiatives have for individual lifestyle choices and consumption patterns (Dowler et al., 2010). This is what is described as the graduation effect: “by purchasing or growing food outside the ‘mainstream’, people [...] rethink ... and refine ... other consumption practices to match their ethical framework” (Dowler et al., 2010: 210). Thus, other aspects of consumption and ethical decision-making at the individual or household level become increasingly influenced by participation in alternative agri-food practices (Cox et al., 2008). The associations with reconnection and morality are also apparent in Brunori et al.’s (2012) study of Solidarity Purchasing Groups (SPGs); as consumers participation increased, they became more active ‘citizen consumers’ as their sociological and biological reconnections were deepened.

Being a multi-scalar process, there are broadly two ways reconnection has been and continues to be articulated (DeLind, 2006; Sage, 2010; Bowen, 2011). Firstly, the perspective of

political economy and macro-scale forms of governance focus on how local and/or regional food systems, and SFCs serve as market-oriented instruments for broader regional and rural development strategies (Marsden et al., 2000; Renting et al., 2003; Marsden and Smith, 2005; Roep and Wiskerke, 2010). Secondly, others have adopted approaches concentrated at the micro-scale containing inductive and sociological accounts of reconnection from across the globe, which are framed through peoples every-day negotiation, understanding and embodied experiences of food in alternative and civic spaces (Holloway and Kneafsey, 2000; Kirwan, 2006; Carolan, 2007, 2011; Delind and Bingen, 2008; Turner, 2011; Hayden and Buck, 2012). These empirically rich accounts reveal the various ways people ‘make’ and ‘do’ their sociological, moral and biological reconnections, often revealing expressions of care for what and how they eat, and for the environments in which food is produced and distributed (Kneafsey et al., 2008).

Indeed, it is within this context that we seek to develop understanding about the ways that reconnection as a sociological and cultural process is practiced within contemporary AFN spaces. The growing evidence base for reconnection-oriented research has focused on materiality and tactile spaces (Carolan, 2007) where inter-personal connectivity and exchanges amongst people occur *in place*. Such encounters and experiences can foster trust, reciprocity and a wider concern about food systems amongst citizens (Fonte, 2013). How reconnection extends beyond the material realm and into emergent virtual spaces of social interaction, participation, and exchange, such as online social media platforms (Kitchin, 1998; Reed et al., 2013) is central to this paper.

2.3. Online space and changing relations

Technological advances now allow for the Internet to be accessed through a range of devices connected to Wi-Fi, which, coupled with cloud computing enables and promotes a 24/7 connected society. The term Web 2.0 captures the way the Internet has changed in recent years. The shift toward a more dynamic platform has enabled the evolution of social media (Kaplan and Haenlein, 2010) and also reflects a move “away from service providers offering static information pages towards facilitating the presence of end-users as active, collaborative, knowledge co-creators with the provision of connectivity tools that allow an ‘architecture of participation’” (Adebanjo and Michaelides, 2010: 239). We therefore define online media as the platforms that are used to disseminate information to others, in the format of a web page, electronic newsletter and news feed where the flow of information is typically one-way, presented by the creator, such as an organisation to an audience or end user. Social media, however, is a more interactive format for online engagement, enabling networking and sharing of information to occur, and dialogue to emerge. However, it is important to be mindful that online connectivity and use of social media is not a universal phenomenon amongst all demographics and geographical spaces. For example, in the UK, an urban–rural divide continues to exist (Riddlesden et al., 2012) and the replication of societal inequalities is also a feature of online space (Kitchin, 1998).

Since the 1990s it has been argued that online ‘cyberspaces’ are re-configuring social relationships, and what it means to connect with others in place. Cyberspace differs in nature from more conventional notions of space as it is socially produced with no physical counterpart. For some, due to the collapse of space–time relations, this creates new ‘spaceless’, ‘placeless’ social spaces, free from the constraints of the body, where social connections fit under new definitions (Kitchin, 1998). Cyberspace, in this sense allows for the merging of dualistic categorisations, such as nature with technology and the real and virtual, “as humans and computers coalesce

³ Influenced by Common Agricultural Policy (CAP) reforms of the 1990s, the 2002 Curry Report ‘The Future of Food and Farming’ adopted reconnection as the pivotal lens for agri-food system restructuring.

through a process of cyborging” (Kitchin, 1998: 394). Through this process, the Internet is regarded as significant in extending the body in new ways (Dodge and Kitchin, 2000; Kitchin, 1998). However, for others, cyberspace potentially leads to a radical dissociation from reality or nature (Light, 1997). Indeed, “[c]yberspaces are dependent upon spatial fixity, they are embodied spaces and access is unevenly distributed. [...] However, cyberspaces do not replace geographic spaces, nor do they destroy space and time. Rather, cyberspaces coexist with geographic spaces providing a new layer of virtual sites superimposed over geographic spaces” (Kitchin, 1998: 403). It is at this juncture that we focus on how the relationship between AFNs and online space, and reconnection within this context has been explored.

2.4. AFN and online space

Research concerned with AFNs has reflected the rise in technological advancements to some degree with Holloway (2002) pioneering investigations into the relationship between online space and AFNs. More recently, studies have started to explore the practical uses of online and social media within the context of contemporary agri-food activities. For example, Farmers' Markets use of social media as an important, low cost, and efficient method of promotion and communication has been explored (Cui, 2014) and discussions around the social interactions taking place online are also emerging. For example, Reed et al. (2013) investigated how such spaces are linked to citizenship in the context of urban gardening, concluding that Internet spaces allow for alliances created offline to be re-enforced and re-created through online interaction. Similarly, online relationships, as discovered by Fonte (2013) did not substitute the personal connections made offline amongst producers and members of SPGs; however, the integration of online spaces allowed for complex coordination activities to occur.

Whilst offline connections highlight the importance of the local as a geographical scale, the interconnected nature of online and social media platforms point towards a 'localisation of the Internet' (Reed et al., 2013). The merging of place, space and time, can be seen through the notion of 'timeliness' (Cui, 2014) or the 'temporality' associated with virtual spaces (Holloway, 2002). This demonstrates the changing nature of social events and the seasonality and availability of produce, as AFNs are bound to the 'biochemical and physical realities of agricultural production', which are inevitably 'seasonal' and 'rhythmic', in contrast to the instantaneous nature of the Internet (Holloway, 2002; Cui, 2014).

Although studies have started to explore AFNs online space (Holloway, 2002; Fonte, 2013; Cui, 2014; Reed et al., 2013), there is scope to better understand the relationship between online space and reconnection, particularly in light of the increasing usage and embeddedness of online and social media activity across society. Building on existing research, the paper uncovers the notion of 'virtual reconnection' in line with Holloway's recommendations for further empirical research associated with virtual involvement in food production around the "the simulation of 'authentic' connectivity between people and the material world" (Holloway, 2002: 71). As such, there is a need to understand how aspects of reconnection are played out beyond the material and into the virtual as the spaces of online and social media present a vibrant platform through which to explore notions of reconnection within AFNs' online space. For clarity, 'virtual' is a description of non-physically existing space (but made possible by software to appear to do so) as opposed to the seemingly conceptual, spaceless, abstract concept of 'cyberspace' (Oxford Dictionaries, 2015; Ogden, 1994 in Walmsley, 2000).

Exploring reconnection in a virtual sense requires a focus on the

key aspects of reconnection, namely the biological, social and moral components (Dowler et al., 2010). Within this context, the tactility, embodied and material aspects are of key importance, neatly situated in the context of time, space, and place. As such, by investigating AFNs' online spaces we aim to explore the ways processes of reconnection are mediated and manifest in a virtual capacity, and to consider how this is related to material connections.

3. Research framework

Seen to be challenging traditional ideas, cyberspatial communication combines words, images and sound into a 'metamedia' which utilises new media (Kitchin, 1998). The methodological approach taken reflects the diversity and complexity of data available and generated when researching online space. As such, the study is underpinned by a rich methodological platform through which to explore the contemporary process of reconnection.

3.1. Case study selection

The paper draws on findings from a range of data collected from eight AFNs in England. AFN case studies were selected using three main criteria. Firstly, the city of Coventry and county of Warwickshire (both situated within the Midlands region, a central strip of counties in central England joining the east and west of the country) provided a geography displaying both urban and rural characteristics, as well as varying degrees of affluence. Secondly, eligible case studies needed to have a substantial online and social media presence (see Table 1). Some case studies without a social media profile but with a website were included as this allowed any potential barriers to creating a social media account to arise. Thirdly, an equal number of case studies were selected based on whether they presented more as a business-orientated scheme (SFC), or a community or civic-based model (CFN) to allow for any nuances in the data which may contribute towards contemporary debates around CFNs (with caution taken over ascribing fixed labels to each of the case studies). The case studies display a sufficient range of AFNs and representation of the business and community-oriented schemes within the geographical area. In total, two CSA schemes, one residential community growing project, and one local food distribution scheme were selected (as the more CFN-orientated schemes) as well as one Farmers' Market coordinating organisation, two farms shops and one box scheme (as the more SFC-orientated schemes), based on the stated criteria. As shown in Table 1, 21 online spaces, across the case studies were included in the analysis.

3.2. Methods used

As research involving online space is relatively new and encompasses a range of media, this study adopts a mixed methods approach in the form of a quantitative Content Analysis (CA) and survey, as well as qualitative Discourse Analysis (DA) and semi-structured interviews. In doing so, we have been able to draw on a rich platform of data to triangulate our findings using multiple methodological stances (Neuendorf, 2004). CA is concerned with focussing on reliability and validity through counting text. In contrast, DA focuses on reflexive examination and interpretative accuracy (Hardy et al., 2004). When used in combination, CA and DA can be highly complementary by revealing different types of data (Hardy et al., 2004; Herrera and Braumoller, 2004). The study also employed the survey and interview method, commonly used in conjunction. A survey, including a standardised set of questions (online and paper based form), was administered as an effective

Table 1
AFN case studies and their online spaces.

AFN case study	Business or civic – orientated	Urban/rural	Established	Website	Facebook	Twitter
Box Scheme	SFC	Rural	2003	Y	2011	2012
Farm Shop 1	SFC	Urban	2003	Y	2010	N
Farm Shop 2	SFC	Rural	2005	Y	2011	2011
Farmers' Market coordinating organisation	SFC	Urban/rural	1956	Y	2011	2011
CSA 1	CFN	Rural	2012	Y	2012	2012
CSA 2	CFN	Rural	2005	Y	2011	N
Local food distribution scheme	CFN	Urban/rural	2005	Y	2011	2013
Community food growing project	CFN	Urban	2011	Y	2012	N

way to collect primary (quantitative) data from a large targeted sample to observe patterns, consistency, bias free and representative results (Clope et al., 2004; McLafferty, 2003; Parfitt, 2005). The interview method was employed (with customers/members) to gain more detail about the meanings behind some of the behaviour identified through the survey and for respondents to explain in their own words and way their lives and experiences (Clope et al., 2004; Valentine, 2005). Attention now turns to the ways the methods were applied.

3.3. Data collection and analysis

Data collection was undertaken in a number of stages. Firstly, the CA was carried out and data from case studies online accounts were collected. Nvivo 10 (Qualitative Data Analysis software) was used to gather the content from the case studies websites, Facebook and Twitter pages (for the CA and DA) using the Ncapture function during August and September 2013. In order to 'count' the text, word frequencies were applied to the 21 online spaces; word frequency tables and tag clouds were generated for each space which provided insight into the frequency of the words used. Themes arising from the CA were further explored by undertaking a DA, involving a reflective examination of the words generated as well as other apparent themes with the text (also including images and videos). Following the CA and DA, interviews were conducted with AFN representatives. All AFN case study representatives were invited for an interview; five AFN representatives were able to participate (others declined due to time constraints). Therefore, during February and March 2014 five face-to-face interviews took place (ranging from 40 to 70 min) using a semi-structured interview schedule including questions about their online and social media page, barriers faced, perceptions of customer/member engagement and views on other businesses use of online space.

The next stage of data collection utilised a survey aimed at case studies' customers and members. In consultation with the schemes, an online survey was launched in April 2014 (using the Bristol Online Survey tool) and a paper-based survey was also made available at case study sites. The survey consisted of closed questions in relation to participants' demographic information, involvement with the respective case studies, their general online and social media usage, and their engagement with (and reflections on) case studies online and social media pages. Overall, 74 customers, and members from three⁴ of the case studies responded to the survey.⁵ Responses were exported and inputted into SPSS for analysis.

⁴ Although all case studies were invited to be involved in the survey (and Farm Shop 2 and the Box Scheme were given paper surveys), responses were only gathered from Farm Shop 1, CSA 1 and CSA 2.

⁵ There was a fairly even distribution of responses from each of the participating case studies: Farm Shop 1 = 22 responses, CSA 1 = 25 responses and CSA 2 = 27 responses.

Sampled from the survey using a self-selecting method, follow up (face-to-face) interviews were conducted with four AFN customers and members during July 2014 each lasting around 45 min each.^{6,7} All willing survey participants were contacted for an interview; some did not respond which could be a reflection of the time of year (holiday season) or the general trend in the saturation of requests for information. Building on the CA, DA and survey data, the interviews were conducted to gain further understanding about participants usage of online and social media, how it impacts their behaviour, viewpoints on the case study's use of online space, as well as how effective they feel it is (or can be) in the context of the respective case study and for alternative food systems more generally. All of the nine interviews conducted⁸ throughout the study were recorded and transcribed, and analysed using a grounded theory style (Glaser and Strauss, 1967) to allow for the generation of emerging themes to arise, to complement the existing data generated.

4. Results and discussion

The following section presents the results of the study drawing on data generated from the CA, DA, survey and interviews. The use of online space, and the profile of participants is firstly addressed before focussing on the interconnected themes of reconnection – biological, social and moral; the section then reflects on the aspect of place and space. The data ultimately points towards virtual reconnection taking place, which is explored further in the concluding section.

4.1. Use of online space

4.1.1. Promotion and communication

In line with existing studies asserting the contemporary nature of CFNs (Renting et al., 2012), Table 1 shows that the more CFN-orientated schemes (CSAs, residential food growing project and local food distribution scheme) are newer than the more established SFC-orientated schemes (Farm Shops, Box Scheme and Farmers' Market coordinating organisation). Furthermore, the SFC case studies established their social media pages on average sooner (Table 1); the following quote from an interview with a representative from Farm Shop 2 shows how SFCs are aware of market competition and observe other businesses use of it.

"There's a coffee shop, well Garden Centre ... and they've got a very big following and they were doing some colourful pictures and that

⁶ Vouchers (to spend at a range of high street shops) were given to interviewees to thank them for their participation.

⁷ The incentive of two local food hampers from participating case studies was used for the prize draw with winners selected at random.

⁸ The research was approved by Coventry University's Ethics Committee and informed consent was obtained from all case studies prior to any data collection, and from all survey and interview participants.

Table 2
AFNs' Twitter Activity.

AFN	Tweets	Followers	Following
CSA 1	431	267	467
Local food distribution scheme	59	58	27
Farm Shop 1	92	332	227
Farm Shop 2	115	160	0
Farmer's market	228	114	8

sort of post and I sort of felt that was a better way, because you're showing people the product aren't you" (CU63, Farm shop 2).

Social media (as Cui, 2014 found) is utilised as a low cost and efficient method of promotion and communication for the businesses, and is also used by the more CFN-oriented schemes in this regard. The following quote from an interview with a representative from CSA 1 discusses the use of Facebook in terms of promotion.

"it's a great way of spreading the word a lot more ... in the early days we all invited our friends - a lot of my friends who live all over the country like the page - just as a way of gaining publicity ... it was aimed more as a marketing function" (CU62, CSA 1).

An analysis of Twitter activity (Table 2) shows that the number of tweets varies from 59 to 431 across the AFNs; there is also a range of followers of AFNs' Twitter accounts (58–332). However, whilst some AFNs are following between 27 and 467 other Twitter profiles, two of the AFNs are not following many people at all (0 and 8). This shows that, in line with social media use as a business tool for promotion, the two Farm Shops use Twitter for more of a one-way promotional tool to tweet about things such as competitions and to gain followers rather than follow people; however as Fig. 1 shows, consumer interaction is encouraged in this regard.



Fig. 1. Twitter competition (linking to Facebook), Farm Shop 2.

Having the time to use Twitter was seen as a barrier for all of the AFNs. Perceptions centred on Twitter needing to have frequent input compared to Facebook, something which AFN owners or initiators were unable to invest in alongside their other commitments, as shown by the following quote from an interview with a representative from Farm Shop 2.

"We have a Twitter account but it's, that's more immediate isn't it, you have to make sure you're doing it two or three times a day and we just haven't got the time for it. Whereas Facebook [we] manage two or three times a week, or a bit more if we're in peak season like summer fruit and we're trying to push the strawberries" (CU63, Farm Shop 2).

The following quote from one CSA representative shows how the perceived time commitments and investments needed to maintain an effective Twitter was something they cannot afford.

"We don't do Twitter, because apparently Facebook you have to post at least twice a week, Twitter you have to post at least twice a day for it to be effective and we're like none of us are going to

Table 3
Facebook Activity.

AFN	Likes	Talking about it	Were here
CSA 1	256	2	–
CSA 2	97	3	–
Local food distribution scheme	23	–	3
Residential food project	147	1	–
Farm Shop 1	404	31	1250
Farm Shop 2	779	65	–
Farmer's market	125	2	–
Box scheme	105	36	1

manage that, let's just not do that. We just don't feel that we could give it the time that it needs to be fresh and vibrant" (CU60, CSA 2).

The level of activity on Facebook (Table 3) shows how the 1250 people have 'checked in' to one Farm Shop in particular.⁹ The higher number of people 'talking' about the farm shops and box schemes more generally (more SFC-orientated), shows how Facebook is used to virtually reflect the physical connections to these spaces of consumption (shops, café and activity areas).¹⁰

Compared to Twitter, Facebook is a more favoured social media tool across AFNs (reflected in Table 1) not only to promote, but also to communicate and facilitate interaction with customers and members (see Fig. 2). For the SFCs, like Twitter, Facebook is used for promotional purposes as the representative from the Box Scheme notes.

"Facebook – I really use it to highlight anything particularly special. I mean obviously Christmas time we run various deals with turkeys and veg sales, veg orders, that sort of thing" (CU61, Box Scheme).

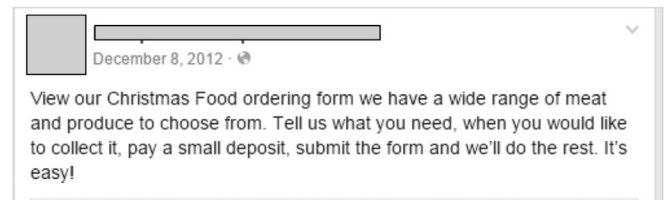


Fig. 2. Promotion on Facebook, Farm Shop 1.

Whilst AFN representatives felt it was important to have a website, some reported that having a Facebook page allowed them to move beyond the functions of a website to facilitate a space for social interaction. This is perhaps becoming increasingly recognised as being important, in line with the rise of social media usage across society and associated opportunities of 'tapping into' this. A member from CSA 1 highlights the additional benefits of using Facebook.

⁹ 'Checking in' to a location through Facebook is enabled through the GPS function with smart phones and tablets. It is an application within social media platforms that enables users to broadcast in real-time their location to their online networks.

¹⁰ It should be noted that Tables 2 and 3 do not take into account a temporal dimension and should be viewed in combination with Table 1. Within the study, the degree of engagement does not depend on the existence of the social media pages.

“Because Facebook is more communication, a website is very static and I think that word of mouth is very important for a project like ours and Facebook helps with that” (CU67, CSA 1).

One Farm Shop kept their website up to date by integrating it to their Facebook page through regular competitions and promotions, encouraging online consumer interaction, and maximising the promotion/exposure of the AFN across multiple online platforms (Fig. 3).



Fig. 3. Website competition (linking to Facebook), Farm Shop 2.

There is evidence of online space as an additional promotional tool used to build upon the important ‘word of mouth’ aspect of AFN relations, creating relationships built on trust (Renting et al., 2003; Sage, 2003; Kirwan, 2006). Online space extends AFNs into the virtual sphere, increasing visibility and being instantaneously accessible for people to connect to, in turn promoting AFNs, as shown by a representative from CSA 2.

“I think the website is really important because it allows us to have a permanent place where people can get a trial sign up and basically, pretty much everyone who signs up for a trial does it of their own volition through the website. ... it's kind of like a permanent shop front which is really useful and once they've got their trial, they're kind of in the system and I then contact them about continuing after the trial, becoming a subscribing member” (CU60, CSA 2).

It is important to recognise that the spectrum of social media use is dependent on the AFN representative assigned to this task (often the AFN initiator or owner, or a younger employee or family member). Alongside a lack of time (previously identified) there was also indication through the interviews that AFN representatives felt their social media skills were not adequate enough and would like some guidance to be able to utilise it better.

“I think one of the things that's quite hard for an enterprise such as ours is to get really good guidance on how to use social media” (CU62, CSA 1).

Table 4
Demographic profile of survey respondents.

Participating AFN case study	CFN	SFC
Gender	F = 74.5%	F = 68%
	M = 25.5%	M = 32%
Age		
20–29	4%	5%
30–39	43%	27%
40–49	27%	14%
50–59	14%	14%
60–69	16%	14%
70–79	0%	27%
Occupation		
Full time employment	49%	45.5%
Part time employment	30%	10%
Retired	6%	45.5%
Other	15%	0%
Ethnicity		
White British ¹¹	90%	100%
Other White	10%	0%
Education (highest qualification)		
None	2%	10%
Other ¹²	2%	16%
A Levels	8%	28%
Degree	46%	24%
Higher degree	42%	19%
Household income (annual)		
≤ £14,000	8%	5%
£14,001–£28,000	30%	14%
£28,001–£48,000	27%	19%
£48,001–£68,000	18%	19%
≥ £68,001	17%	43%

However, AFN representatives expressed creative ideas in conjunction with future use of social media, since it has become more accepted and standardised into everyday life and could visualise utilising it more.

“When we get a new product in we should take a photograph of it, put it on Facebook, and then you know, get it out. We should do that more” (CV64, Farm Shop 1).

The use of social media in particular as a promotional tool but also one for interaction and communication has been shown as well as AFN owners and initiators views on using such spaces. The views and behaviours of customers and members will now be explored.

4.1.2. AFN customers and members

To gain insight into the socio-economic profile of members and customers (Section 3.3 outlines the number of respondents) this section will focus on the demographic of the survey respondents. As shown by Table 4, the CFN respondents comprise a younger population and more people in employment compared to the SFC respondents who are generally older, wealthier and retirees. The majority of participants are educated to degree/higher degree level, and whilst noticeably comprising a large proportion of White British members, CFN members are more diverse than SFC customers.

The age of one SFCs existing customer base was seen as a barrier by one Farm Shop owner and thus did not view social media as important.

"Lots of our customers are quite old and they probably don't use social media" (CU64, Farm Shop 1).

However, another SFC representative saw the associations of social media with a younger generation as an opportunity, a reason to engage with it, and felt they could expand and diversify their customer base by doing so.

"I was sort of conscious that we should perhaps be trying to reach out a bit more to a younger customer base and we thought that was the way to do it" (CU63, Farm Shop 2).

A mixture of longstanding and newer customers and members are shown through the survey, and in general respondents use online and social media regularly. Perhaps reflecting the respondent demographics (age), more SFC customers do not engage with social media at all, compared to a more regular use of social media by the CFN respondents who engage with it more frequently. As social media is used by respondents to 'keep up to date with what family and friends are doing' as well as to 'find out about what's happening in the world', it is likely that in this way social media is used as 'word of mouth' promotion (virtually) within social networks.

Awareness of the AFNs' website was high amongst respondents regardless of how often they use it showing how websites are perhaps a commonly accepted and acknowledged 'space'. A higher number of the SFC respondents lacked general awareness of the AFNs' online space (website, Facebook and Twitter page) in comparison to CFN respondents. Despite the findings around the awareness and usage of online and social media, the majority of respondents felt having a website was important (although 11% of Farm Shop respondents thought it was not important at all). In contrast, more respondents did not see the importance of a social media presence (through Facebook or Twitter) (one third). Whilst the use of and views around the importance of online and social media could reflect the demographics of respondents, it is likely that (offline) social interactions (which facilitate trust and transparency) are viewed as foundational and not able to be substituted or replaced. This section has shown how online and social media is used by AFNs to connect (further) to their customers, using social media as an additional promotional tool. Furthermore, it has been highlighted how online and social media extends the spaces of AFNs for customers and members in particular. The following section moves on to explore the biological aspects of reconnection in online spaces.

4.2. Biological connections

Biological reconnections, along with social reconnection, are the most prevalent themes within the data. Nuances shown in the data below demonstrate that the aspect of material reconnection is particularly apparent in the more CFN-orientated schemes (rather than the SFC-orientated schemes) where the regular commitment and receipt of weekly produce generates a greater sense of reconnection, based on more active practices (Fonte, 2013). The aspect of 'real time' very much underpins the themes within this section.

4.2.1. Food

The most frequent words generated through the CA on average from the eight websites were associated with 'food'; these words were to do with the seasonal produce grown (types of fruits and

vegetables, and the word 'veg'), associations to the growing process (i.e. 'planting', 'seed', 'cooking'), and through the word 'fresh', connotations to local and seasonal food. Various meal occasions are apparent in this theme, such as 'lunch' and 'BBQ' illustrating the promotion and occurrence of social events as well as what the produce is used for. As demonstrated in this section, the CA results yielded a much broader selection of words than those associated with food, reflecting how AFN practices also place value on the wider socio–environmental relations.

Images of food were present across all of the case studies, including the types of produce grown or produced and available in CSA shares (Fig. 4). In particular, images of the weekly share of produce (accompanying the lists of produce – see Fig. 5), as well as produce being planted and harvested were common and something that members reported appreciating. This allows members to extend the experience of connecting to the land, produce and the scheme, through a virtual capacity.



Fig. 4. Vegetable share contents on Facebook, CSA 1.



Fig. 5. Vegetable share contents on Facebook, CSA 2.

¹¹ Including English, Northern Irish, Scottish, Welsh.

¹² Also including foreign qualifications, GCSEs or equivalent.

"It's really nice to kind of just see how everything is going and quite often you'll get photos of 'just pulled up all these onions today', that's quite nice" (CU65, CSA 1).

This practice extends the biological into the virtual, and through time/space compression (Harvey, 1989), allows for members to experience the material environment at a distance through an embodied experience, without being physically present. Although tactility, smell, touch and taste are not made possible through virtual reconnection, members can resonate more closely with these senses as they receive shares on a weekly basis; a merging of the material and the social boundaries. The following quote is in response to discussing whether online space can be used to connect people to their food.

"it can't directly because food is real and social media isn't ... the other things that we try and do quite a lot is put up pictures of things growing in the fields and things like that which I think if you can't get up to the farm all time is quite useful, and we get a lot of people liking the photos, so obviously people do like to see that" (CU67).

Whilst recognising that reconnection cannot be substituted through online space, using the virtual to extend the material is one deliberate strategy reported by one CSA to contribute to and extend the notion of material reconnection. Indeed, the online spaces for their members, enables the involvement at a distance (for some) (i.e. not frequently going to the CSA for workdays and/or social events) and for them to remain connected to the scheme.

4.2.2. Date/time

Words associated with seasons, days, years, and times were the most frequent words on social media. This expresses the 'real time' aspect of social media, referred to by Cui (2014) as 'timeliness', and connection to the month (and season) of the year. As such, these words represent and reflect 1) the seasonality of produce, 2) the importance of the day of the week (in relation to pick up days for example), and 3) the element of being able to communicate instantaneously, with the word 'now' appearing frequently (especially in the social media cases). The CSAs in particular noted how popular sharing the contents of the vegetable share is, therefore this is something done on a weekly basis.

"People really like knowing what's going to be in the share or, if they don't recognise what it is they can look it up" (CU62, CSA 1)

Thus, virtual spaces are in tune with the 'biological and physical realities' of food production and, in contrast to the 'instantaneous nature of the Internet', are 'not destroying time and space' (Holloway, 2002; Kitchin, 1998). In line with the material dimensions, the following section draws on the importance of the social realities of agri-food practices.

4.3. Social connections

Based on the premise that AFNs revolve around social relations, the importance of offline social relationships in sharing interests or behaviour was apparent. For example, around half of respondents (50%) heard about the respective AFNs through 'word of mouth', with the remaining made aware through advertisement of an event or from a poster. SFC respondents were also made aware of the business from 'passing by' (32%) the Farm Shop or online (18%). Social relations are shown through images



Fig. 6. Producer, Farm Shop 2.

throughout the online spaces, for the SFCs, images of producers (Fig. 6) with the product convey notions of transparency and trust.

For the more CFN-orientated schemes groups of people collectively working, including families and children are present; such imagery presents notions of existing (offline) community and harmonious relationships (Figs. 7 and 8). Online spaces are therefore able to generate such notions, which contribute to the (re) creation of material spaces in an online capacity.



Fig. 7. 'Work day', CSA 1.

Aiming to portray the material spaces online is according to one AFN representative, something that can also be achieved through Facebook, which is particularly important for schemes such as CSAs, where social aspects are intrinsic to their ethos.

"The website is meant to be more so you can sit and read almost and hopefully Facebook is more of an idea of the feel of the community" (CU 67, CSA 1).

Facebook is used by CSAs' members to interact and communicate, especially to participate in discussions (some of which are associated with the AFN movement), to share what they have done with the produce from their vegetable share, or to discuss work



Fig. 8. Community, CSA 2.

days and work parties for example. The following quote demonstrates how one respondent feels Facebook promotes interaction.

“between members yes, sharing of ideas ... a lot of ... people have their little sort of niggles or issues with a particular vegetable or whatever and it's, like we'll put something on the Facebook page or, it's a way of sharing it and finding out if anyone has got a solution for too many swedes¹³ or something” (CU60, CSA 2).

Within these embodied virtual spaces of interaction, notions of offline community are extended online as members partake in community activities virtually, even if they cannot physically attend (Section 4.1). This may be linked to new ways citizenship is performed online (Reed et al., 2013).

“You know, not that we would have gone [to the cider and beer festival] but it was quite interesting to keep up with it and see how it was going because they'd never done it before so consequently we were sort of wishing them luck” (CU66, Farm Shop 1).

Whilst the websites are considered a useful one-way promo-



Fig. 9. 'Rurality' on website, Farm Shop 1.

tional tool (Section 4.1.1.), some of the AFNs' websites contained online spaces particularly for members (with a secure log in) but also likely to be the first point of call for potential members. In this sense, membership gives rights to access the scheme physically but also further virtual rights too. The following quote is in the context

of the usefulness of online space.

“I think it's primarily for the people that are already there, but it's very useful for if somebody is interested to be able to have, to get more of a feel” (CU67, CSA 1).

The general notion is that such online spaces are harmonious (with 'thank you' posts frequently present) with no evidence of debates or offensive behaviour (see Reed et al., 2013). However, as the online spaces represent practices within the material spaces, images associated with social relations portray predominantly White middle class individuals and groups. In line with research exploring the Whiteness of AFN spaces (see for example Alkon and McCullen, 2011; Slocum, 2007), this online representation could pose a further barrier to those from other BAME¹⁴ populations in terms of engagement with some AFNs. As virtual reconnection is representative of the material, questions are raised around the extent AFNs and their online spaces are aimed at progressively changing the profile or image of AFNs or whether such spaces are used to reach an extended audience.

4.4. Moral connections

Recognised as a theme which deserves further attention, the extent to which online spaces serve to morally reconnect people and foster deep commitments is questionable. There was some evidence to suggest that social media in particular was used as a means to 'spread the word' about AFNs and the multiple positive impacts they have, and to create behaviour change amongst groups of people who had little or no prior interaction with the tactile qualities of AFNs. This is reflected in the following quotation, whereby social media was used to broadcast this respondent's commitment to their local CSA, and to encourage their (online) social networks to become members:

“I've managed to get friends to sign up by poking them with the Facebook page a few times ...because they see it, or not even deliberately poking them with it but because they've seen it on my feed, they've gone 'oh yes, I'll sign up” (CU67, CSA 1).

However, engagement solely online does not necessarily mean that the moral reconnections are necessarily strengthened or commitments to 'alternative' paradigms or behaviours deepened. As noted, this depends on material engagement with the physical, tactile spaces of AFNs. In terms of changes in behaviour as a result of online and social media, as previously discussed, CSA participants spoke about how useful the strategy of sharing the contents

¹³ Also known as rutabagas.

¹⁴ Black, Asian and Minority Ethnic.

of the share was, to be able to plan their food into their everyday lives. Whilst centred on the rhythmic biological connections, this also allows for some element of planning and for members to be prepared for the produce they will receive.

“For me, I like to kind of know what kind of things I’m getting so I can start thinking about sort of meals that I can make throughout the week and what I can use things for, if I should get excited or if I should think ‘oh’. It’s not very often I think ‘oh’” (CU65, CSA 1).

This could have further impact regarding sustainable or ethical behaviours or lifestyle choices such as reducing household food waste for example although these linkages are tentative at this stage. In general, respondents were somewhat ambivalent when asked whether the growth of online and social media had changed or influenced their food behaviour. Although it has not been possible to address this fully in the paper (due to the constraints of the study), further research should consider how virtual spaces might contribute to a change in behaviours associated to the graduation effect (Cox et al., 2008) or wider practices of citizenship (see Reed et al., 2013) from their methodological starting point.

4.5. Place and context

The paper has discussed the ability to participate at a distance (time/space compression made possible through new technologies) but also how these virtual spaces show that time and space is not destroyed (Kitchin, 1998). This is particularly apparent for local geographies. In terms of the material, around 14% of the words online refer to physical site or details of the AFNs and includes shop names of towns or villages (e.g. Leamington, Warwick) where AFNs are located or connected to, as well as contact details. ‘Local’ (as well as specific place names) appears within this context too as a word, and also consistently appears through descriptive text and imagery within the online spaces, for example; “to involve

local people in the process of producing the food they eat” (CSA 2). Associations to the word ‘community’ are also apparent which alongside ‘local’ may prove attractive for both citizens and outsiders (e.g. tourists) who may be ‘passing by’ (important in the context of SFCs). One SFC saw their business as inherently embedded in the locality, and saw Facebook as a tool to promote not only their business, but the area too. Although beyond the scope of this particular study, having an online presence could have wider effects for place-based development, and for rural/food tourism.

“It is a way of getting it out and it spreads the message about a town centre even, rather than just a food festival” (CU61, Box Scheme).

In addition to food and people, images associated to the landscape, nature and rurality are also present within the online spaces (Fig. 9). Such connotations to local demonstrate the significance of the local in virtual reconnection (building on the significance of the locale in material reconnection) and the contextual significance of the material underpinning the virtual space, very much “providing a new layer of virtual sites superimposed over geographical spaces” (Kitchin, 1998: 403). As such, AFNs’ virtual spaces are not a detached entity from the material, supporting Reed et al.’s (2013) assertion about a ‘localisation of the Internet’ and also provide new sociological spaces building on and extending offline social practices (Section 4.1).

Whilst there is a variation in the geography of both SFC and CFN case studies, what is apparent is that the case studies are serving both urban and rural populations (shown through the example given in Fig. 10 with the cluster in the urban city area). For the CSAs in particular, members come from nearby urban populations. Not only does the connection between rural and urban contribute to debates about access to nature and wellbeing, it also extends the transformative ability of engagement with local food production and consumption to those living in nearby urban localities.

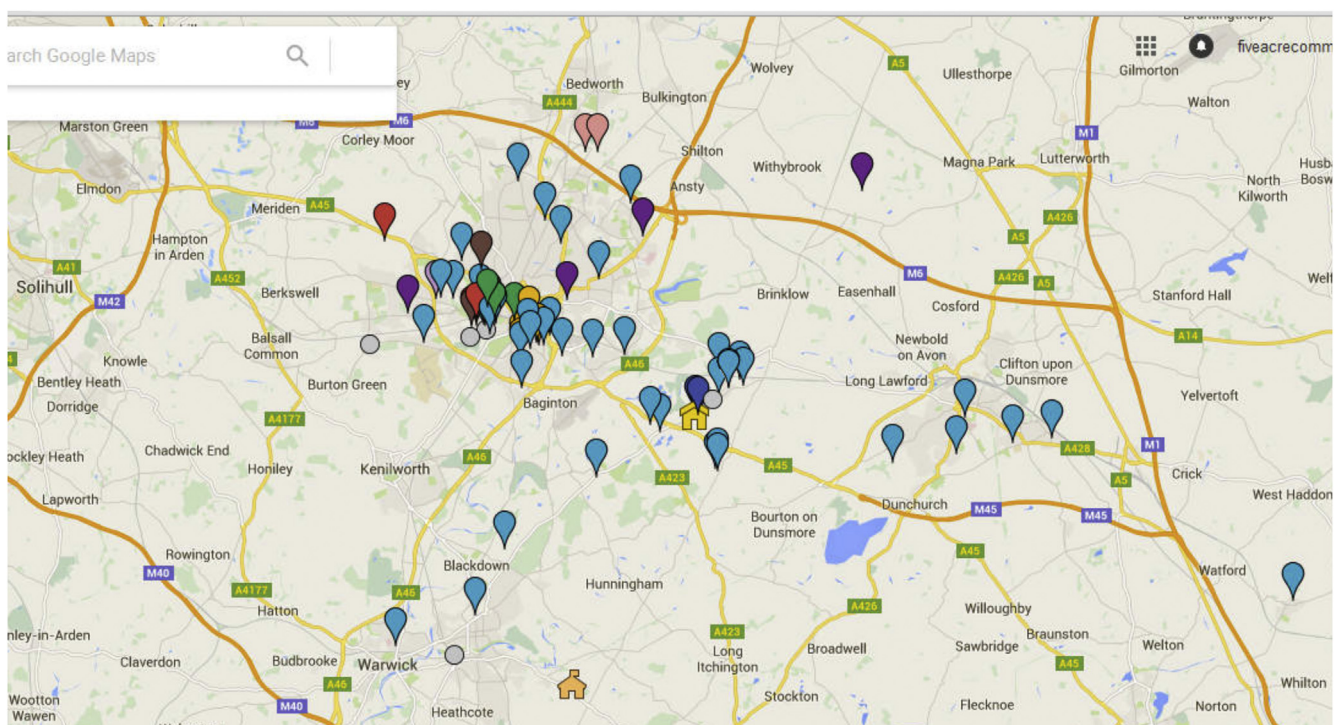


Fig. 10. Map showing members of CSA 1 (taken from website).

5. Conclusions

This paper has set out the key debates regarding AFNs drawing on more recent notions of CFNs as a means to explore how citizens engage and participate in a selection of different contemporary food initiatives and businesses. We have justified the need to explore the increasing use of online space in the context of AFNs, using reconnection as the starting point. Furthering the exploration of AFNs by examining their online spaces and how they are utilised, this paper has considered how the interconnected biological, social and moral processes of reconnection (embedded in the material) are mediated and manifest in a virtual capacity, through the notion of virtual reconnection. Due to the range of AFNs currently in existence, further research within this area is welcome, as we do not claim that the findings from our study are representative of all AFNs and their participants.

AFNs involved in the study take online and social media seriously, and see the potential of increasing their profile and customer base or membership through using it. Having an online presence is a low cost and efficient strategy for the case study AFNs, most often used for promotional purposes, broadcasting, and advertising. Whilst caution has been taken over ascribing fixed SFC and CFN labels to case studies there are particular nuances in the data that help with progressing AFN debates. For example, an online presence, particularly for the SFC case studies, enables them to generate new custom, to advertise promotions to new and existing customers and to aim for a more diverse and larger customer base. Although increased visibility is also one way in which CFNs use online space, a key difference is how such space is used for social exchanges and interactions, by utilising the interactive and participatory attributes of social media platforms to extend such notions apparent within their scheme. Furthermore, the extension of AFNs material space into a virtual realm not only complements existing producer–consumer or member relationships, it also utilises members and customers' existing social networks and contributes to the development of AFNs (both SFCs and CFNs). This occurs by capitalising on customers and members as promoters who assist in the development of organisational reputation and ultimately, income or sustainability.

In line with [Reed et al.'s \(2013\)](#) findings, online spaces are 'superimposed' over localised, material spaces. Although online spaces reinforce the materiality of AFNs, there is much scope to use online spaces to further develop the transformative, critical potential of AFNs. There is an opportunity for CFNs in particular, to be more inclusive and to appeal to more diverse populations as they offer different opportunities for engagement, moving beyond consumption practices alone ([Renting et al., 2012](#)). The tendency of CFNs to incorporate civil society as central components in determining how these initiatives are governed enables a participatory and transformative outlook ([Renting et al., 2012](#)) with food increasingly being viewed a political issue and gathering interest from a range of citizens.

It is asserted that citizens are becoming engaged in CFNs not only as a means to access healthy, quality food, but also to address much broader, critical issues related to social inequalities and injustices, especially in times of austerity ([Levkoe, 2011](#); [Anderson et al., 2014](#)). In the context of our study, whilst the CFNs comprise slightly more diverse members (in terms of age, occupation, ethnicity) (in comparison to the SFC customers) there is still a common tendency for highly educated, female participants. A deeper understanding of the range of motivations and barriers for engagement in CFNs is needed to fully understand their inclusive potential, and impacts on behavioural change and area transformation.

Both urban and rural areas were included in the study, and

findings show that case studies serve both rural and urban populations as well as the tourism market (in the case of SFCs). Recent figures show that in England, 18.5% of the population reside in rural areas; these residents generally have an older age profile and are of White British ethnicity compared to urban populations ([ONS, 2013](#)). Although this needs to be taken into account when researching online spaces, a number of opportunities can also be observed. Engagement in CFNs, materially and virtually, may assist in addressing a number of societal problems related to: social isolation, dietary problems, and a lack of opportunities for biological connections, for example, for both urban and rural dwellers. Therefore, whilst the role of cities is becoming increasingly prominent in contemporary agri-food debates (see [Moragues-Faus and Morgan, 2015](#)), rural-urban linkages should still remain on agendas as should the role of food in rural development (of which SFCs have a particular role to play) ([DuPuis and Goodman, 2005](#)).

The inclusive and transformative possibilities of CFNs concerning behavioural change at the collective and individual level is promising, which moves beyond the individual consumerist responsibilities concerned with SFCs. As previously asserted, whilst there has been some indication of social media influencing more sustainable behaviours, the moral dimensions of reconnection have been harder to explore within the constraints of this study. This is because the biological and social aspects of reconnection are replicated more easily online, and to fully appreciate the 'gradual' ([Cox et al., 2008](#)) decision making process and the moral viewpoints of people arguably requires more in-depth approaches. Research focused on behavioural change processes would enable debates about reconnection, virtual or material, to be more closely engaged with contemporary debates about sustainable and inclusive agri-food systems, including those which are citizen-led. Moreover, the ways in which online spaces cultivate (or conversely stymie) 'deep commitments' ([Carolan, 2006, 2007](#)) and connections towards CFNs and broader, critical agendas requires further exploration. Indeed, the Internet may now be regarded as the epitome of communication and an 'architecture of participation' ([Adebanjo and Michaelides, 2010](#)), but grounding within the indispensable material spaces needs to be at the core of online interactions, within the context of AFNs.

We have revealed that online and social media extend and supplement the interrelated socio-material connections taking place in AFNs' offline spaces thus adding an additional layer to the material, tactile spaces. As online spaces are an additional (superimposed) layer to AFNs' offline space, and due to the embodied nature of these virtual spaces, a virtual reconnection is apparent. We have argued that, through 'real time', social-material reconstructions are extended and made possible through online spaces (in the case of consumer–producer, and member or citizen relations). However, aspects of the biological and tactile qualities of food (such as smell, touch, taste) as well as the social qualities of reconnection (founded on face-to-face interactions and notions of trust) and the embodied ways of knowing, are difficult to fully replicate in the same way as in 'offline' spaces (in line with [Fonte's 2013](#) findings). Virtual reconnection therefore needs to be treated with a degree of caution and understood in a supplementary capacity rather than as a substitution for socio-material reconnection.

In this study, technology extends, builds upon and incorporates the material spaces. However, the extent to which technology (in the broadest sense) acts as a disconnecting intermediary needs to be considered in future explorations – to this end, the following questions may prove helpful: Firstly, does the use of technological intermediaries limit the extent to which people experience and pursue material reconnection? Secondly, are 'real' social relations and skills being compromised by society's gradual migration to a technologically dependent future? Thirdly, what are the impacts of

the use of online and social media for AFNs and does this impact on the development of different geographical localities and how their citizens participate in sustainable and participatory food practices? Lastly, what role does technology and online spaces have for moral reconnection and consumer transitions from 'passive' and disengaged with food politics, to 'active', engaged citizen-consumers with transformative objectives? This final question would be a suitable point of departure to merge some of the critical issues highlighted here, with the existing work around sustainability transitions as articulated by Brunori et al. (2012) and others seeking to better understand how food system transformations that aim to be more just and democratic become reality (Levkoe, 2011; Lutz and Schachinger, 2013). Whilst not ignoring the role of wider food system governance (and corporate responsibility), in-depth ethnographic studies exploring both online and offline behaviours, and the impacts this has on participation within CFNs, would be suitable to address these questions.

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