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**In Pursuit of Recognition in a Digitally Divided City:**

Conceptualizing voice, visibility and presence in the age of social media

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**ABSTRACT**

With social media’s increasing importance in modern society, this thesis investigates its role in the digital economy and how it shapes the everyday lives of Sheffield’s residents. The significance of social media ties, transactional relationships and concepts about how new media functions in the public sphere are interwoven throughout the literature review. Digital interactivity is conceived as a process, which in turn, influences the perception of status, reputation and recognition. Qualitative interviews were conducted with participants from each of the following three cohorts: computer learners, knowledge workers and global elites.

An interactivity spectrum was developed after participant interviews emphasised how social media usage related to employment prospects. This spectrum evaluates the cohort’s online interactivities based on the following categories: technology and data linkages; networking and engagement; representation and identity; information awareness and sociability. This conceptual framework draws on usage patterns and investigates the social ties forged through digital connections. Interactivity serves to amplify voice and visibility; thus, online presence becomes an active form of social capital incorporating both visibility and voice. These cases suggest how digital interactivity and social capital accumulation may be theorized using voice, visibility and presence on the social media sites of Facebook, Twitter and LinkedIn. The three groups (learners, knowledge workers and elites) strive separately to achieve both local and national forms of recognition within the public sphere and are clearly marked out by their differences in social media interactivity. This research is important as it delineates a social capital creation pathway that begins with digital engagement and ends with social capital accumulation. The connection between engagement and capital creation also compels a rethink of the digital divide in light of new participatory media practices.

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CHAPTER 1: INTRODUCTION

This research is concerned with the promise of recognition in the public sphere and how groups jockey for an audience to hear and see them on social media. The purported social media revolution arrived in 2009/2010 when the public started networking and following news streams as reported by the public across the globe. It started with younger age groups and fanned out into the general populace. This notion that people could show the world their grievances clicked with the advent of the Egyptian demonstrations against the Mubarak administration in January 2011. The Arab Spring, as it became known, demonstrated that Twitter and Facebook showed how people tried to bring voice and visibility to political resistances across northern Africa. These protests did not occur as a result of social media, rather they were brought to the global stage with the help of social media platforms. Social media was then heralded as a powerful tool which could unleash endless possibilities generated by our online and offline social connections. The propaganda around the Arab Spring phenomena led to a singular question: has a communications revolution really occurred?

Far from the tumultuous lives of those in Egypt, the residents of Sheffield also contend with how to bring attention to the issues that matter to their economic, political and social well-being. This research, therefore, sheds light on the importance of public recognition as a form of societal validation. The ways that wider recognition of the issues experienced by different groups of citizens jockey for attention: to be *heard* and *seen* by each other. While their experiences may not circulate the globe, their issues matter at the national stage and represent the scale present in the lives of ordinary urban residents.

Like others around the world, Sheffield’s social media users generate content that relies on a network of connections to build a voice and visibility, which substantially contribute to the likelihood of being recognized. Content circulation is dependent upon the audience’s reaction to a consumable product which also encourages participation. This could be a dancing image gif that leads the viewer to laugh, for example. Many factors influence the ability to use social media effectively including digital skills, confidence, and access. Indeed, the ability to cultivate a sense of social presence, one that encourages interaction, is the key to wider public recognition. It leads to questions about the implications of not using social media. Digital skills, in particular, include the ability to sift through information while being bombarded with it.

The social media interactivity of sociodemographic groups in Sheffield were probed and included computer learners, knowledge professionals and elites. These three groups all relied on different institutions to carve out their economic opportunities. The first group, computer learners, lived in social housing estates throughout the City and were connected to each through a network of community-based e-learning classes offered by Heeley Development Trust. The knowledge professionals comprise the second group of this research and work within the core of the City in either the Workstation or the Electric Works. Lastly, the elites are geographically spread out throughout England and consist of: two Chief Executives, one Business Leader, three Members of Parliament and one policy leader in Central Government. This results in vast differences between how these groups seek influence in the public sphere.

The accumulation of social capital occurs once social media presence has been established combining elements of both voice and visibility. However, presence is dependent upon social media engagement and networking interactivities. The five categories of social media interactivity take into account platform operability and the ability to use social capital resources. The purpose is to draw a direct link between social media interactivity and social capital benefits. The categories were formed based on Sociability, Informational awareness, Networked engagement, Data Linkages, and Identity and representation. Each social group included in this research: computer learners, knowledge professionals and elites have their overall social media interactivity analysed against their social network ties. This approach allows the theory to grow beyond social media tool usage to its direct relationship with social capital accumulation. The social capital resources hinge on the development of relational ties, how they manifest online and whether they can be leveraged by established, puissant relationships.

**The Structure of the Thesis**

This thesis is divided into several chapters which are based in the literature and upon the empirical material collected in the field. The content is set out below:

*Chapter 2: From Abstract Concepts of Recognition and Presence to the Tangible Realities of Social Media*

This Chapter sets out what recognition means for social media users. It delves into what constitutes social media. This leads to how social capital manifests in media networking activities as relational ties. The chapter concludes with theories of the digital divide.

*Chapter 3: Conceptual Framework of Digital Interactivity Spectrum*

This chapter explains the interactivity and social capital tie-based conceptual analytical framework. The research aims and steps are also refined into more penetrative empirical questions. The case study of Sheffield with its computer learners, knowledge workers and elites is also introduced. The research questions focus on how individuals’ social media interactivity affect the ability to accumulate and use social capital. By focusing on the interactivity of different groups, the research questions the importance of voice, visibility and presence as a result of network behaviour, particularly how networks and connections are formed among Sheffield. This research objective is to introduce a spectrum model and framework of interactivity which presents the optimum way to show the diversity of experiences toward an idealized combination of digital skills and confidence. In short, the interactivity framework coupled with the spectra shows how each cohort maximizes social capital and resource accumulation. The inferred model will show how social media interactivity encompasses a full range of the skills, activities and strategies employed by Sheffield’s residents. The types of interactivity will be compared amongst socio-economic categories. This will determine how interactivity influences the generation and use of social capital amongst Sheffield residents. This method showcases the social striations present in the interactivity levels across the city of Sheffield during the 2013-2014 period. The use of spectra seeks to highlight at what point capital is created and whether voice and visibility merge into a distinct presence.

*Chapter 4 Designing and Undertaking the Fieldwork*

This chapter delves into how the fieldwork was shaped around the City of Sheffield as a singular case study. It describes each cohort in-depth to develop a comprehensive view of the City of Sheffield’s social media environment.

*Chapter 5: Computer Learners’ Interactivity*

This chapter describes the interactivity profile of the computer learners who are receiving computer classes through the UK Online Centre branch of the Heeley Development Trust. It explains how welfare reforms emphasize adoption in contrast with large scale tech infrastructure projects.

*Chapter 6: Knowledge professionals’ Interactivity*

This chapter describes the interactivity profile of the knowledge professionals who work in the Electric Works or Workstation locations in the City centre. It delves into how generating content shapes an influential socio-economic network of ties.

*Chapter 7: Elites’ Interactivity*

This *chapter highlights the* interactivity profile of elites who live and/or work in northern England. It illuminates the role transactional relationships and recognition plays in the digital economic life of British urban centres.

*Chapter 8: Social media and structural network ties*

This Chapter delves into how social media interactivity influences the creation of networks of bridging and bonding forms of social capital. It focuses on the strength of social network ties and how each cohort operates within its own sphere of social media interactivity and institutions critical to their success in the digital economy.

*Chapter 9: Advancing the Theory of Recognition and the Digital Divide*

This chapter highlights how social media circulation around the City of Sheffield concerning the #bedroomtax issue raises issues of the digital divide among the three cohorts. It focuses on issues of voice, visibility and the role of transactional ties to raise recognition of the impacts of a proposed national policy.

*Chapter 10: Conclusions on Societal Recognition*

This chapter concentrates on comparing the interactivity spectrum as they relate to each cohort. The conclusions highlight the contemporary complexities and nuances faced by the public as it struggles for recognition in a social media amplified world.

CHAPTER 2: FROM ABSTRACT CONCEPTS OF RECOGNITION AND PRESENCE TO THE TANGIBLE REALITIES OF SOCIAL MEDIA

Part One: Conceptualizing Recognition

The field of urban planning often understates, or simply does not consider the significance of a community or group being acknowledged by the public. This concept of being acknowledged encompasses not only a feeling of belonging, being included, but also one that communicates attachment and group affiliation to the wider public. Acknowledgement eliminates uncertainty within a public grouping. In the act of recognizing a group or entity, urban planning often concerns itself with equality of representation in democratic processes. Recognition does not concern itself with processes. Instead, the issue of ‘recognition’ in a pluralistic, diverse society requires not only being valued by the whole, but also validated by it. This type of affirmation does not come easily, and for many, understanding how to achieve recognition in a sea of voices is a constantly shifting goal. Furthermore, the pace of technological change has been not only unsettling, but disruptive to ordinary people’s quest for inclusion.

Recognition, validation and affirmation begin with the idea of presence. Presence manifests as an outward form of someone that is indicative of a particular quality, i.e. the ability to project the sense of a real person and is perceived as thus. Social presence, and the perception of it, are very contextual in quality. The ability to project some semblance of presence on a spatial surface, signalled by voice and visibility, remains a challenge for most communities, or individuals, in the best circumstances. According to Lowenthal (2010), online presence is defined by a combination of affective, cohesive and interactive responses. By his definition, affective responses consist of the use of humour, emotional displays and self-disclosures. Cohesive responses, on the other hand, display vocatives, use of inclusive pronouns, and salutations. Lastly, interactivity in regard to presence involves continuing a thread, quoting others, referring to other messages, expressing agreement and expressing appreciation. Co-presence, defined as a person or group inhabiting both real space and on social media, appears to be a requirement of modern life unless one is already in a privileged position. Equal treatment in the public sphere is not guaranteed to those who only occupy one space.

If society continues along the same path, will people require a presence on social media to assert democratic rights and equal economic opportunities in the future? Recognition on social media does not differ vastly from what one receives in person, although the rules are different. They are written in code by software engineers with their own agenda to foster specific behaviours, which in turn, can be sold to advertisers (McAfee and Brynjolfsson 2017). The research subjects highlight the ways social media activities are shaping society’s access to homes, jobs, participation in the public sphere, and the lengths people will go to ensure they are not deliberately excluded from life.

In discussing recognition, Fincher and Iveson (2008) argue for a relational rather than an essentialist approach to engaging with diverse social groups in an urban context. Because the relational aspect allows for a wider variety of voices and visibility to emerge, it recognizes the experience of diversity in urban life. Recognition of the public’s experience in the digital economy in Sheffield lies at the crux of this research. Fincher and Iveson (2008) considered the notion of ‘recognition’ as a way to acknowledge multiple identities and issues of redistribution. This research, on the other hand, hinges on the experience that three groups in Sheffield have in their pursuit of recognition in the digital economy and democratic spheres. Recognition helps each group to legitimize their experiences to the wider public. Achieving recognition validates a group’s experience, such as acknowledging that one group will face difficulties as a result of a policy change. Users of social media not only seek recognition of their presence online, but look to quantify their position through the number of validations on their posts. Validation of content appears in a multitude of ways on social media platforms, but is often tallied as the number of people who affirm posts by liking or sharing them. In this way, social media users’ quest for validation moves beyond the need for only recognition. Like validation, recognition occurs when both voice and visibility align to create a presence.

However, validation of presence on social media is important precisely because it provides a convenient, and often near-instantaneous feedback loop which serves to affirm communicative action. Mutual reciprocity on social media platforms happens either between independent actors, or within a collective. This feedback loop affirming social presence (the combination of voice and visibility), and the reciprocity that this generates, is vital to the establishment of not only recognition, but validation of presence. It serves as a counterpoint to not being heard or acknowledged for many users. While Fincher and Iveson (2008) argue that government needs to recognize the diversity of their residents to ensure equal representation in democratic processes, this does not extend to groups or people recognizing the needs of each other. Social media is often construed as being a powerful and influential conduit to information and other people. Social networking sites serve to mediate the perception of recognition in the public sphere, therefore, the digital interactivity levels of Sheffield’s urban residents are worthy of further analysis.

Part Two: What is social media?

The terms ‘social world’ and ‘being social’ are widely used concepts which reflect a common dimension of the world in which we live and are terms associated with the domain called social media. The social world has broadened widely over the past twenty years to include global gathering spaces online. Generally, these spaces have been treated by researchers as a reflection of in-person, societal interactions which also occur offline.

Social media may be defined as a class of technologies that shares four main features: digital profile, relational ties, search and privacy, and network transparency (Kane et al., 2014). It is dynamic, fluid and global in reach with emphasis on social networking. The definition may be expanded to include all social network platform sites which allow members to create profiles, connect with each other, and socially interact with these connections (Phua et al 2017). Users may upload, like, and generate comments on photos, videos or posted messages. Standard dictionaries have also validated its impact on society and defined it as “websites and applications that enable users to create and share content or to participate in social networking on the Internet or mobile phones” Oxford living Dictionary, Anon (2017). Social networking sites contain regularly updated, chronicled information on topics such as work, personal life, or political beliefs. It usually features news and sometimes links to other subjects deemed important by the account holder. Social media disseminates through a network of connections where ultimately everyone is connected to each other via platforms where content works of user-created video, audio, text or multimedia that are published and shared in a social environment.

Over the past decade, the personal and professional lives of those residing in the United Kingdom have been inundated with social media platforms. For example, Facebook, YouTube, LinkedIn, Wikipedia, and similar sites enable individuals to make connections, share expressive content, showcase professional careers, and enjoy social lives online. Consequently, many people have moved these previously offline activities to online environments, for example replacing their professional “Rolodex” of contacts with a contact list on LinkedIn.

Platforms for digital media evolve with the digital culture and the public that uses them (Miller, 2012). Indeed, whereas the networks maintain connections, the platforms enable this new level of sociality. They are dynamic objects that respond to user needs and objectives and to competition from similar platforms. The utopian spirit of these platforms underscores Silicon Valley’s corporate mantra to make the world appear more open and transparent. Whereas networks link connections, the media platforms enable social connection. The platform creators thus view them as socially dynamic objects that respond to user’s needs and objectives, as well as to competition from other platforms.

People tend to predict a revolutionary transformation of society after a significant new technology is introduced, including social media and communications technologies. Williams (1990, 1975) defines this as technological determinism, or setting conditions for social change and progress. This vision of new technologies defines them as independent and even separate from society and assumes that they “fulfil a need or solve a problem; bring about a certain condition of the future; or create a profit or some sort of personal gain” (Miller, 2011, p. 5). The utopian spirit of social media involves repackaging various ideas of culture, such as participatory culture, networked culture, digital culture, media culture, and the culture of connectivity. These cultures rely on the ability to understand and use information on a mass scale, which requires a level of insightful awareness. The free to access nature of the platforms which host the social media sites, in addition to their ease of use for professionals also highlights the benevolent halos manufactured to emphasize “collaborative culture.” These revolutionary claims decidedly point to technological determinism.

It is commonly believed that society influences how and when social media circulates in non-networked and networked communities. For the first time, audiences actively shape the flow of media. Meanwhile, customer service professionals, brand managers, marketers, and global conglomerates listen and sometimes, respond. I introduce theories of how social media functions in the city as an emerging hybridization of circulatory practices. It consists of both top-down and bottom-up forces in the creation of content that is shared in participatory and often messy ways. Yet, audiences base their decisions to like or share content on the available options present on the social media platform. Townsend (2014) argues that planners focus on the physical aspects of cities, as they are the most tangible. Like the built environment, it is the design elements of social media platforms that determine how people connect and network online. Telecom networks allow us to view “the vital social processes of cities” in real time (Townsend, 2014, p. 160). Social media networks reveal these details as well. The big data scraped from these sites has the potential to offer extraordinary glimpses into our interactive behaviours. Yet, this perspective detracts from important questions about whether technology shapes people, or vice versa. Instead, an obfuscated urban archetype emerges regarding how citizens describe and tell stories of their cities through social media narratives, such as how everyone owns a smartphone, particularly teenagers and young adults.

These global city narratives fail to provide any insight or context about the potential audience. Indeed, user behaviour becomes more important as media networks become more ubiquitous. This research takes the view that social media mediates human behaviour in several ways. For example, platform design defines node and tie formation and maintenance that homogenizes user behaviour. Social media also allows users to visualize their network structures and search content without using their relational ties. These user behaviours introduce complex relationship dynamics in the built environment. The technology industry therefore needs an urban management process to enable the next wave of globalized automation and to challenge assumptions about the user experience.

Audience engagement, via interactive behaviours with influencers and/or gatekeepers along their network nodes, all affect how socio-economic groups use social capital to engage in politics, work, and life in general in both positive and negative ways. As defined by Maak (2007), social capital involves a combination of philosophies:

What more researchers seem to agree on is that there is, depending on its configuration, potential value in the content of social network ties. Yet, due to the complexity of the social fabric of social relations and the varying motivations to access the resources in question, we find multiple levels of analysis, content or structural approaches, and normative or instrumental takes on social capital. (2007, p. 33)

Many scholars broadly agree that social capital is embedded in individual relationships and depends on the availability of tangible and intangible resources (Adler and Kown, 2002; Burt, 1992; Lin, 1999; Putnam, 1995; Nahapiet and Ghosal, 1998). Social capital theory involves relationship networks that contain valuable resources for conducting social affairs and leveraging collectively owned capital to provide individuals with various credentials (Nardone et al., 2010, 243). The benefits of such capital include advice, sponsorship, and access to information, resources, and opportunities (Brass and Krackhardt, 1999). Individuals do not own this capital; rather, it results from mutual trust and the expectation of reciprocity between individuals (Burt, 2000). Therefore, social capital may be defined as intrinsically relational. Such relationships facilitate cooperative action (Prusak and Cohen, 2001).

Engineering sociality into media: “Architecture is politics” Mitch Kapoor, computer pioneer

The way to achieve recognition on social media requires knowledge of its distinct mode of operation. The sociality that follows is based on a logic-based model, however, human interactions are not always predictable even when they are distilled down into one hundred or so possible scenarios as allowed by the architecture. The platforms are engineered to be “free, perfect, and instant” (McAfee and Brynjolfsson 2017). A platform’s value also increases for the user as more people use it, otherwise known as ‘network effects’. Easy interoperability, along with an established list of contacts on other platforms, allows users to switch between social media platforms.

Servon (2008) asserts that the digital divide is a complex issue that reflects longstanding societal inequalities. Like the built environment, however, platform architecture design, which enables social media networks, duplicates these inequities. Many social media design features that aim to provide value and meaning for clients also depict injustices. For example, all social media platforms rely on the popularity principle (Jenkins et al., 2013). This principle relies upon human connectedness and is fundamental to understanding the culture of social connectivity. Numbers that signal popularity are displayed and quantified for users. By regulating connectedness as algorithmic concepts, social media technology transforms connectivity into a quantifiable concept.

Within human society, “well connected” individuals tend to be gauged by their quality and status of connections rather than quantity (Van Dijck, 2013, p. 13). Within social media, however, the noun “friends” and the verb “friending” refers to online social ties, which can be weak or strong. These terms refer to the quantifiable number of people who participate in an online stream (i.e., followers, groups, devotees, and believers). Larger networks, in alignment with the demand side economies of scale, give an advantage to people with larger networks. This makes a difference to people or communities who seek recognition because it necessitates a large, indeterminable network of ties.

The higher the number of followers, the more popular the account holder becomes. More people then seek to connect with the popular person, as it may bring them affirmation (Van Dijck, 2013). Content circulation between and within networks creates value and meaning through the media landscape that conveys a simple message: “if it doesn’t spread, it’s dead” (Jenkins et al., 2013). Jenkins et al. (2013) uses the terms spread, spreadable, and “spreadability” to delineate the technical and cultural potential of audiences to share and repurpose content. Cultural practices that enable new platforms do not liberate people from old practices, but rather serve as a catalyst for other forms of culture, such as social relations, political participation, and economic expectations.

In Malcolm Gladwell’s *The Tipping Point* (2000), he refers to stickiness needed to attract audience attention and engagement with content. Media that solicits deep audience engagement and aggregates attention to specific content in a centralized place has such stickiness (Jenkins et al., 2013). Markussen (1996) uses the term “sticky places” as those that attract and retain capital and labour, despite globalizing tendencies. Stickiness thus can be developed and built via multiple media platforms in specific, geographically defined locations with assets that foster the spread of media. Individuals in those areas use their social connections to attract, build, and preserve online reputations that matter greatly in the human capital and labour markets. Sometimes their brief posts facilitate this stickiness, but again, stickiness relies on a network to not only support, but recognize the value in these efforts. The entire network does not need to agree or validate the post, but it does require the approval of a set audience.

The variety of communicative categories for social media posts is staggering and includes the following (Honeycutt and Herring, see Stieglitz and Lang-Duan 2013: 220): ‘about the addressee, announce/advertise, exhort, information for others, information for self, metacommentary, media use, opinion, other’s experience, self-experience, solicit information, and others’. In examining retweets, Boyd et al. (2010) found that different conversational aspects such as how authorship, attribution (of information), and reciprocal fidelity are negotiated in diverse ways. Sometimes retweeting plays to a specific audience for entertainment or commentary purposes and to show solidarity with an idea, organization or person.

## Twitter

Twitter is a social media platform that charts the typical mass personal communication mode. At the time of this research, it is easy to use from both a mobile device and a personal computer. Twitter users, whose screen names start with the “@” symbol, share “tweets,” or messages, that are limited to 140 characters (this was changed to 240 characters in 2016 after the field work for this research was carried out). Users can follow other users but are not necessarily followed back. It is possible to either “broadcast” tweets, which are available to anyone who follows or looks directly at your account, or to send direct messages to a named individual, which are private. Tweets often contain links to websites, and users can retweet, mention, and reply to them. Retweeting (including user-modified tweets) means to push a button to forward other users’ content with or without comments, which spreads information to other Twitter users for commenting or endorsement. Mentioning acknowledges other users or starts conversations. Direct conversations tend to be interpersonal and dialogic, designed for persuasion and to solicit attention and feedback. Such directed interactions achieve more reciprocity, relational closeness, and trust (see Xu and Feng, 2014). Replying responds to direct conversations. Twitter usage reveals node asymmetry among users, as typically the more “popular” or important the node is in a global network, it will have a higher ratio of “followers” to “followed”. For example, as of 7th August 2017, Robbie Williams has 2.61M followers and follows 130 people.

## LinkedIn

LinkedIn is a business-oriented social networking service for professional networking. As of April 2017, LinkedIn reports more than 467 million acquired users in more than 200 countries and is available in twenty-four languages (<https://www.linkedin.com/pulse/linkedin-numbers-2017-statistics-meenakshi-chaudhary>). The service allows employees (predominantly knowledge professionals) and employers to develop profiles and connections predicted on professional expertise and trust. Users may invite anyone inside or outside of LinkedIn to become a connection. If the invitee selects "I don't know" or "spam," however, this counts against the person who initiated the contact. If the initiator receives too many of these responses, it will be flagged by administrators, and likely closed. Active connections offer the following features:

* Interaction with connections of connections (it also displayed the type of connection such as second-degree or third-degree
* Social and business opportunity recommendations from contacts
* Job and candidate matching
* Access to hiring manager profiles to determine if other contacts can provide introductions
* Photo posting and viewing
* Company news and current offers
* Bookmarking, or saving, potential jobs
* Ability to "like" and "congratulate" other users' updates and employment
* Ability to see who has visited one’s profile page

LinkedIn uses a "gated-access approach," in which contact requires an existing relationship with that user or intervention from a mutual contact. This approach builds trust among users and allows users to research companies. Company statistics provided by LinkedIn include the ratio of female to male employees, percentages of common titles and positions held within a specific company, a company's headquarters/locations and a list of present and former employees who use the platform. The service also makes applying for jobs easy, as it allows applicants to use their LinkedIn profiles as resumes.

Head hunters, recruiters and human resource personnel use LinkedIn to find potential job candidates based on various search parameters, such as location and skill sets. A request to connect, or InMail, can be sent from list results about specific job opportunities. Recruiters also may join industry- or location-based industry groups to connect with professionals. One interview participant called LinkedIn ‘a modern, digital Rolodex”.

LinkedIn allows users to endorse their connections’ skill sets. Commentary on skills and attributes also may be posted between connections to reinforce reputations in a professional network. LinkedIn solicits endorsements from connections based on platform algorithms that generate skill sets, though users may opt out of the solicitations. The service also recently expanded to add an analytics tool for users to track the traffic from their posts. Another notable feature is their “Influencers” program, which is an invite-only program that shares insights and posts from the top 500 “thought leaders,” such as Richard Branson, Rahm Emmanuel, Martha Stewart, and Bill Gates.

The company attracts revenue from selling access to information about its users to recruiters, job seekers, and professionals. It also features a sponsored ad service to spread specific content among its user base. They also offer the ability for corporations to sample their professional profiles for a set fee to test potential social network revenue.

LinkedIn may help companies with their workforce challenges. One interviewee stated that “people buy people first”. As a social media platform, it cannot be used as a substitute for in-person introductions. LinkedIn does have the capacity to operate as a resource for past person-to-person introductions. For professionals, LinkedIn offers several ways users may be recognized by others.

## Facebook

Facebook is the most popular social networking service on the Internet. It launched in 2004, and by September 2015 boasted 1.18 billion active accounts around the world. Users who register can create profiles, add other users as "friends," block users from seeing their profiles, exchange messages via their chat program, post status updates and photos, share videos, use various apps, indicate their entertainment preferences, and receive notifications when friends’ update their profiles. Facebook offers many features, such as the “Like” button, which allows users to express appreciation of status updates, comments, photos, and advertisements. Participating Internet websites can display a similar Like button on their company websites, and users can "Follow" users to see their public postings without adding them as a friend. Users can join groups based on common interests, such as work or school, and categorize friends, such as "people from work" or "close friends." Users can contact the Facebook service team to handle concerns and issues.

The Facebook News Feed, which launched in 2006, was one of the first features on the site. It appears on every user's homepage and highlights profile changes, upcoming events, and friends’ birthdays. Initially, some users complained that the interface was too cluttered, and others worried that it made it too easy to track users’ relationship status changes, private events, and conversations.

Several researchers have tried to measure the level of influence on behaviours from individuals using the Like or Follow button. For example, a study of 61 million people examined social influence and political mobilization during the American 2010 Presidential elections (Bond, 2012). Facebook users were given the opportunity to "tell your friends you voted" by clicking on an "I voted" button. Users in the study were two percent more likely to click the button if it was associated with friends who had already voted. Defining this level proved important to Facebook, because it gives potential corporate clients confidence in their ability to influence behaviour based on their advertising presence, thus generating revenue for the Facebook Corporation. It also added to the recognition of the user.

**The Link between technology and employment**

The pressure to save costs has forced employers to move recruitment and selection onto the web (Green, 2017). These policies have generated “an environment of technological compulsion” (Clayton and Macdonald 2013: 947), in which technology forms an important part of the "culture of employment” (Green 2017: 1639). Recruitment represents the first gateway to employment, therefore how people interact with technology while job seeking is relevant. In short, as Green found, computer skills play an important role in employability, but not at the expense of the ability to interact socially in a conventional manner.

Green (2017) found that UK employers’ own websites were used most frequently to attract possible recruits. Further, the 2014 UK Employer Perspectives Survey showed that twenty-one percent of establishments showing a job vacancy used their own website as a recruitment platform (up from seventeen percent in 2012) (Shury et al., 2014). This enables employers to be conventional and strategic in how they ask for information. This method includes the monitoring of scores as respondents proceed through the questionnaire and the elimination of participants who do not meet a predetermined threshold score from submitting a comprehensive application for a position. This shows the ways that employers can use ICT to shape individual employability by managing the volume, type and grade of applications they will consider for a job (De Hoyos et al., 2013). Employers have long used referral hiring to find a suitable pool of candidates; Green (2017) found that this reliance on informal recruitment methods during the recession remained in use. So, while ICT-enabled recruitment channels demand a specific threshold of skills and serve as a gateway to employability, the recruitment process also involves outreach through an existing network. The 2014 UK Employer Perspectives Survey, meanwhile, showed that seven percent of employers engaged in active recruitment used social media (up from three percent in 2012).

Hooley (2012) has determined ‘seven Cs’ of digital career literacy that are important in the present job search climate: changing, collecting, critiquing, connecting, communicating, creating and curating. Demonstrating all seven attributes likely enhances an individual’s employability in many cases. This framework does not necessarily apply to learners, however, many of whom seek jobs as carers and in retail. Demonstrating capacity in all seven may cause them to be excluded as ‘overqualified’.

Green (2017: 1649) proposed a spiralling vortex image (see Fig. 1) to show how employers handle the scatter-gun approach to the job search. The scatter-gun approach, in which searchers complete multiple applications online without tailoring their approach to each application is espoused in the UK by Jobcentres to fulfil the conditions of receiving unemployment benefits. This further exacerbates the unemployability and digital divide issue.

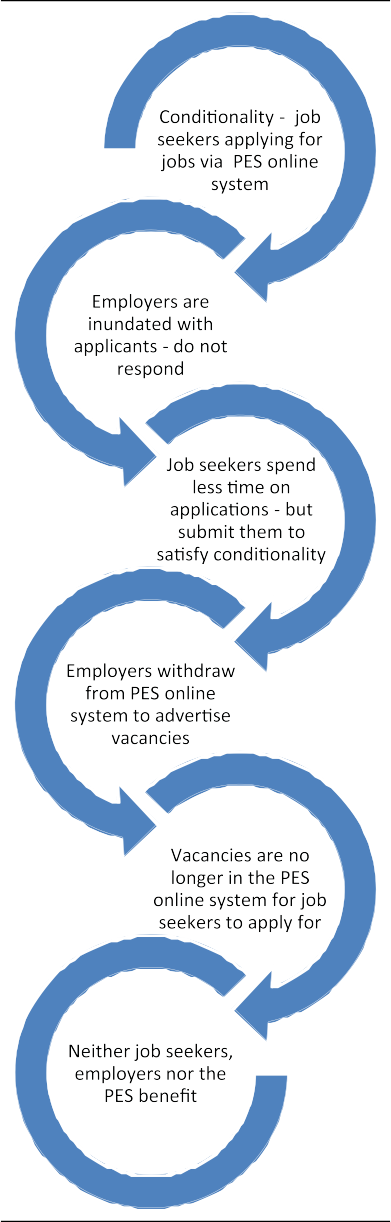


Figure 1: Job search approach shows how employers handle the scatter-gun approach to the job search (Green 2017: 1649). The acronym ‘PES’ stands for public employment site in the above figure.

Knowledge professionals work from project to project with multiple employers, they embody the term ‘itinerant experts’ (Barley and Kunda 2004). Fenwick (2012) characterizes their work conditions as precarious in nature because they demonstrate low levels of certainty over continued employment, low control over working conditions, wages, pace of work and no regulatory protections. In addition, the income generated from these employment practices may be insufficient to maintain a household (Cranford et al. 2003). Fenwick (2012) explains that developing credibility and a reputation in a local market depends on referrals and short-lived appearances, usually the most recent work. She (2012: 604) believes reputations pivot on ‘informal, tacit realm where judgements about a person’s capability and trustworthiness can be based on hunches, rumour, appearance and personal prejudices’.

Barley and Kunda (2004) posit that for the itinerant experts, they must manage who they know as well as what they know to a wide audience. This is the basis for credibility and reputation in the digital economy. Thus, their survival hinges on managing reputation, knowledge of product/service and leveraging the social capital accrued from the offline/online social networks. Fenwick (2012: 601) has cited McRobbie (2002), who argued that networks are temporary structures based on ‘fleeting social interaction’, not development ‘through long term collective structure and are linked to personal association and goals of self-promotion and self-advancement’ and thereby segregates large swathes of the overall workforce from each other.

The creation of content also generates media interactions and is often produced by knowledge workers. Social media networks show that relationships rely on people transmitting and sharing content, in addition to others further down the network responding to and possibly augmenting the content before sharing that content in turn (Swani et al. 2014; Ridgeway 2013). This reciprocity strengthens businesses relationships and behaviours along a network are matched to become mutually beneficial over time (Quinton 2016). Since many professionals are connected via social media with their co-workers (Duggan et al. 2015; Weidner et al. 2012; Schmidt et al. 2016), this matters significantly to their ability to relate to peers.

Part Three: Networking and the concept of influence

This leads me to a discussion of influence in the social network. Processes on social networks are based on three factors (Shalizi and Thomas 2011): homophily, social contagion, and the causal effect of an individual’s covariates on network behaviour. Homophily, defined as the formation of social ties due to matching traits, is representative of bonding capital. Another feature of networks, social contagion, is also known as ‘going viral’ or ‘spreadable media’ in common parlance. It relies on social ties to move through a network structure. Shalizi and Thomas (2011) noted that bonded ties occur among people who are close together in a social network and share similar characteristics, act similarly and have similar events occur to them. However, one asks the question, does this suggest a contagion occurrence or is it because of a combination of shared similarities between the bonded individuals that this happens? They also contend that the following causes a social contagion: inspiration/ imitation/ persuasion, biological contagion (such as when a virus can cause similar behaviours), shared fondness for a particular activity, latent homophily of an unobserved characteristic, or a common external causal factor. Interestingly, Shalizi and Thomas (2011) contend that homophily and contagion look so similar that it is difficult, and perhaps impossible, to differentiate between them.

Whether one believes in social contagion or homophilic causation, the social media sphere of influence only extends as far as a network and associated networks. The cumulative scale of these networks feels very overwhelming to social media users. School teachers often demonstrate the ‘power’ of its scale by asking people to share a post and tag their location to see where it pops up around the globe, how fast this occurs, and the number of people that share it. Shalizi and Thomas (2011) argue that this phenomenon may be caused, not by social contagion but by a string of behaviour choices. Is the social structure explained by this effect, or is this cultural effect of spreading the word an adaption to a new social structure? These scholars suggest that it is produced in a homophilic network that is latent or manifest which produces homogenous clusters which all value particular traits. Observationally, it is impossible to distinguish; even mathematical modelling has not been able to pinpoint the distinction (Shalizi and Thomas 2011).

Social network bonding ties remain strong across social media channels for all the participants, bridging ties that continue to flourish; that is what drives up the number of followers and friends. They represent a growing number of people who want to align themselves with an entity, organization, brand or special interest group.

## Social ties, types, and design

Ties are the connections between individuals. They also exist between nodes and consist of several types. Social network analysis research identifies four ties that are relevant to social media networks (Kane et al., 2014, p. 282):

* Proximities:the shared physical or social spaces that provide opportunities for tie formation, such as living in the same city and working in the same office. On social media, this is defined as using the same platform, belonging to a group, and using location-based services.
* Social relations: persistent social connections between nodes, such as friends, colleagues, or bosses. On social media, they represent friends, connections, followers, and affects (likes or dislikes).
* Interactions:discrete and transitory contact with another node, such as talking in person, having lunch, or calling another node. On social media, this includes messaging, e-mail, and discussion boards.
* Flows:movement between nodes, such as money, goods, knowledge, information, and sentiments. On social media, this includes trends, retweeted content, and social bookmarking systems.

Social media providers group ties in combination with one another or with different taxonomy lists. For example, LinkedIn developed large-scale lists of workforce skill and expertise sets, dubbed “folksonomies,” to categorize content such as public speaking, project management, and geography education. They generated these lists after harvesting the online resumes of their followers (Bastian et al., 2014). They provide context for social media’s platform architecture and its proximities, social relations, interactions, and flows. Social media, for example, facilitates the information flow between nodes that may not be connected via popular topics or @ topics. Therefore, the different tie types, whether they represent skills, users, relationships, or content, influence network formation in dynamic ways. Granovetter (2005) posits that social structure, in the form of social networks, impacts economic outcomes. This occurs for three reasons: 1) networks affect the flow and quality of knowledge; 2) they form a vital source of reward and punishment; and 3) confidence in others to do the right thing emerges in the context of a social network.

## Social media and relational networks

Relational networks offer another theoretical perspective on the importance of linking industrial locations with network infrastructure. Bathelt and Glucker (2005) explore the “relational turn” in economic geography, which is concerned with how networks of firms and production systems vary from place to place. The relational turn aims to increase competitiveness by creating, accessing, and sharing knowledge. Their research focuses on knowledge sharing beyond global competitiveness. How firms link with one another through knowledge networks can help explain the social organization of individuals. Bathelt and Glucker (2005, p. 1553) assert that social relations are “constantly being produced and reproduced through on-going communication between the actors … about which technologies to use.” They maintain that their theories on the interrelationships of knowledge resources emphasize the important role of physical infrastructure to ensure competitiveness in a global market. Bathelt et al. (2005) assert that global linkages, rather than local connections, facilitate innovation at technology firms and global knowledge flows.

Knapp et al. (2014) assert that relational ties are important, as they influence attitudes, intentions, and behaviour. All three of their concepts (belonging, identity, and psychological ownership) predict satisfaction. However, their results imply that identity may not be as strongly needed by community members. They also contend that social media expands the types of social connections that IT can support. However, the effects of tie types on social media networks remain unclear. Their influence may depend on the design of the platform.

Perceived insider status represents a sense of belonging and inclusion, which develops through practices and benefits that signal to an individual that they have achieved member status. Membership fulfils a human need for inclusion, agency, and control over surroundings. People who perceive inclusion accept responsibilities as an organizational citizen and are more likely to have positive attitudes about the community (an affective commitment). They prefer to stay within the community and to support community functions via “innovative behaviour.”

**Social Capital**

Social capital is the term given the resources available through business and personal connections. Forms of social capital include information, ideas, business leads and opportunities, influence, emotional support, goodwill, trust and cooperation. All of these forms of capital rely on a set of network ties with a reciprocity built into it along with a social network. In short, these resources reside within network structure of ties of various strengths. Social capital remains a crucial element of human’s ability to be productive – fulfil purposes and provide value. Social capital, in essence, is the “sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition” ([Bourdieu and Wacquant 1992](http://www.sciencedirect.com.ezproxy.lib.purdue.edu/science/article/pii/S0747563217301140#bib3): 14). It exists solely through, and activated by, relationships with others. Social capital serves two main purposes for people who use social media: it bridges connections through which people may receive information and opportunities ([Adler & Kown 2002; Burt 1999](http://www.sciencedirect.com.ezproxy.lib.purdue.edu/science/article/pii/S0747563217301140" \l "bib1)) and; it produces a set of personal relationships using a system of norms and reciprocity (Phua et al 2017). Two distinct forms of relationships exist within the context of social capital. Bridging social capital refers to disconnected relationships among individuals that may make available opportunities for information sharing and are sometimes referred to as weak ties. Bonding capital, on the other hand, describes strong relationships which provide emotional and social support. The presence of strong trust is a feature of bonding capital.

The ability to network and leverage social capital is influenced by individual personality traits (Forest et al., 2001) and by situational variables, such as job function, employment skills, and organizational position (Michael et al., 1993). Networking, as it contributes to social capital, is a highly social activity related to personality traits like extraversion and self-esteem (Forest et al., 2001), conscientiousness and proactive social relations (Thompson, 2005). However, the relationship between socio-demographics and networking (ability) remains inconclusive. Wolff et al. (2008, p. 113) state that “the antecedents of networking is that individual and structural differences” all contribute to confident and successful networking.

Forrest and Dougherty (2001, p. 302) completed a comprehensive review of networking behaviour and concluded that “human capital variable were significant predictors of networking behaviours and should be included in future research.” Whereas an inconclusive relationship remains between demographic characteristics and networking skills, engaging in networking develops relationships and increases social capital capacity. Within an organizational setting, when compared to other employees, supervisors and managers rely more on networking behaviours (Forrest et al., 2001; Michael et al., 1993). Manager salaries were also indicated to positively correlate with networking behaviours.

Borgatti and Foster (2003) wrote about binary connections such as friendship, kinship, common interests, likes, and dislikes (Romsaiyud et al., 2012). This research features interchangeable concepts, and these bonds endure through mutuality. Through these mutual bonds, social capital can be created. These relationships provide access to support and resources. Granovetter (1973) commented that networking relationships comprise weak ties that can strengthen if the relationship becomes familiar via frequent contact.

As a basis for social capital, network theories add value (Adler and Kwon, 2002; Brass and Krackhardt, 1999; Burt, 2001; Lin, 1999; Nahapiet and Ghosal, 1998). Trust and language are primary relationalfacilitators, as described in social capital literature. Resource accessibility is embedded within networks that share norms. As Maak (2007) describes, social capital encompasses philosophical differences:

What more researchers seem to agree on is that there is, depending on its configuration, potential value in the content of social network ties. Yet, due to the complexity of the social fabric of social relations and the varying motivations to access the resources in question, we find multiple levels of analysis, content or structural approaches, and normative or instrumental takes on social capital (p. 33).

Confusion also abounds regarding the measurement of social capital (Tronca, 2011). Many scholars broadly agree that social capital is embedded in individual relationships and depends on resource availability (Adler and Kown, 2002; Burt, 1992; Lin, 1999; Putnam, 1995; Nahapiet and Ghosal, 1998). Social capital theory involves relationship networks that contain valuable resources for conducting social affairs and leveraging collectively owned capital to provide individuals with various credentials (Nardone et al., 2010, 243). The benefits of such capital include advice, sponsorship, and access to information, resources, and opportunities (Brass and Krackhardt, 1999). Individuals do not own this capital; rather, it results from mutual trust and the expectation of reciprocity between individuals (Burt, 2000). Therefore, social capital may be defined as intrinsically relational. Such relationships facilitate cooperative action (Prusak and Cohen, 2001).

These social network theories explain how behaviours influence the number, strength, pattern of ties and resources of an individual’s social network. The network thus contains actors and connections that represent positive, negative, or null relationships (Brass et al., 1998). Fully understanding social network ties appears impenetrable because of the complexity inherent in these relationships.

## Networking and social capital

Cities have recently experienced a proliferation of new information technologies with the advent of social media platforms that support interpersonal communication and collaboration. Millions of people worldwide use social media sites like Facebook, LinkedIn, and Twitter. Social media use figures prominently in UK life. According to Ofcom’s 2014 report, 66 percent of UK adults used social media sites and UK adults spent nine hours per day consuming media in 2014. Among adult social media users, 30 percent use Twitter, and 96 percent have a Facebook profile (Ofcom 2014). The rapid ascent of social media has longstanding implications for the public.

Social capital is related to the concept of networks, as it focuses on relationships. Bruni et al. (2000) links the importance of social capital to the density of networks in that trust, cooperation, and reciprocity in relationships positively impact society. According to Bourdieu (1986, p. 2480), social capital is “the aggregate of the actual or potential resources which are linked to the possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition.” In short, social capital consists of obligations and connections amongst group members. Coleman (1990) further defines it as a public good, a collective asset, either real or potential, and Putnam (2000) validates the notion of connections among individuals. They noted an important social trend away from maintaining neighbourhood interactions and toward networks dominated by friends and family. Like in networks, social capital relies on trust and a common understanding. Castells (1996) noted that with the emergence of a “network society,” people sacrificed “bridging social capital” for “bonding social capital” (Hampton and Gupta, 2008). This shift in human capital represents an important change in perception of what matters to social mobility. Whereas human capital refers to the qualities present within sole individuals such as the skills they bring to the digital economy, social capital is an often intangible resource generated between at least two people (White and Green, 2011). Parnwell (2007) offers a conceptual model of social capital in which “associational” social capital forms through networks, collaborations, interpersonal relationships, and collective actions. These actions, in turn, may increase cultural erosion, individualism, atomization, and materialism and may decrease bonding social capital, trust, social interaction and authority, and competitiveness.

Social network analysis has been performed in the social sciences for over 100 years to identify the relations and linkages between people and their chosen “social” groupings. It relies on a network as its central construct with a set of interrelated dyadic ties. Dyadic ties represent a paired relationship or a binary set of groupings. Nodes within these networks consist of entities such as individual actors, organization or items within the network, and the connective types are conceptualized as social relations, such as “friend” or “colleague.” Dyadic interactions include a person who “chats to” or “promotes to” to another person. Additionally, sets of ties link to form paths. These paths provide mechanisms for nodes to affect each other indirectly. Social network analysis posits that a node’s position within a network structure determines its opportunities and constraints.

Kane et al. (2014, p. 277) point to four areas of social network research. These include environmental shaping,whichishow the network environment exerts an influence on its members; contagion, which ishow resources spread through network and influence nodes; structural capital,which ishow individual relationships benefit or constrain; and resource access, which is how nodes access and benefit from network resources. Castilla, Hwang, and Granovetter (2006, p. 219) find that networks in Silicon Valley “have special importance in the movement of labour, the evolution of influence and power and the actual production of innovation.” A social network, as defined by Castilla et al. (2006) comprises of “a set of nodes or actors (persons or organisations) linked by social relationships or ties of a specified type.” Trust between ties remains a crucial component. In their study of Silicon Valley social networks, two types of networks affect trust between parties: relational networks produce conceptions of what each actor owes the other and are based on history, and structural networks enable actors to form connections with others while avoiding malfeasance.

In discussing the uptake of financial products, Granovetter (2005, p. 36) asserts that “in most real labour markets, social networks play a key role,” and he calls these networks a form of social capital. He states that all social interactions transmit information (i.e., share knowledge). This knowledge sharing may result in an asymmetric transmission and is highly influenced by social structure. Indeed, Granovetter (2005) links the diffusion of innovation to social networks, although the “socially marginal” can break from accepted practices more easily, because their behaviours are unregulated by the norms of dense social networks. This project seeks to understand the knowledge sharing behaviour from three different cohorts by examining the behaviours, expectations, and norms of individuals in each group.

Granovetter (2005, p. 34) describes four main principles of social networks relevant to economic outcomes. The first principle involves norms and network density. As shared ideas about how to behave become more firmly held, the social network becomes denser. Denser networks influence how information, ideas, and influence travel between two nodes, such that trust and group cohesion occurs more frequently within more dense networks. The second principle states thatindividuals obtainknowledge from their weak social ties, because strong ties tend to belong to similar social circles and thus have similar information.” Burt (1992, cited in Granovetter, 2005) expanded the weak ties debate by highlighting the importance of how different network parts must be exploited so that knowledge resources flow between networks. The third principle is the importance of “structural holes”, which reflect those parties in a network who act as a bridge between disconnected groups. Finally, the fourth principle is the interpenetration of economic and non-economic action,which focuses on how economic and non-economic activities are socially embedded.

Granovetter (2005, p. 36) asserted that “in most real labour markets, social networks play a key role.” He calls these networks a form of social capital and states that all social interactions transmit information (i.e., share knowledge). This knowledge sharing sometimes results in an asymmetric transmission, and it is highly influenced by social structure. Granovetter (2005) links the diffusion of innovation to social networks but notes that the “socially marginal” easily break from accepted practices, because their behaviours are unregulated by the norms of dense social networks. This definition is critical to this research’s desire to explore sharing and social media behaviour from three different cohorts by examining behaviours, expectations, and norms of individuals in each group.

The diversity of experiences is relevant for people using information and communications technologies, particularly social networks. Reagans and Zuckerman (2001) find that diverse social networks among R&D teams accounted for higher productivity, compared with people in homogenous networks. Following Granovetter (2005), weak ties in the network can aid individuals with diverse linkages. These diverse connections also translate into greater social capital. Holgate et al. (2011) evaluated ethnic minorities in Lambeth and Hackney, where Union membership has declined, to understand how social networks apply in these communities. They found that ethnic minorities did not capitalize on bridging social capital and that their social networks offer little employment advice or support. In fact, Holgate et al. (2011) determined that relying on local contacts limits employment prospects within ethnic enclaves where network ties consist mostly of family and kin.

In general, social networks reflect the ability to maintain and create social capital (Donald and Blay-Palmer, 2005). Popularity in social networks depends on country of origin or residence, religion, profession, age, and hobbies. People around the globe can connect based on these attributes and use the multi-sensory technology in smart phones to text, share pictures, play games, find businesses, listen to music, watch videos and talk on videophone.

Ferrary and Granovetter (2009) find that dense social ties generated tacit knowledge and provided an “innovative milieu” for the technology workforce in the Silicon Valley. Silicon Valley “is characterized by high clustering density in which ethnic ties, university ties, friendship ties, past professional ties and current professional ties … determine the creation of knowledge” (Ferrary and Granovetter, 2009, p. 334). While this thesis is more concerned with the creation and value of ties than the knowledge they explicitly or tacitly create, this clustering density and types of relationship concept is germane to the groups under study. After conducting complex network theory to understand innovation in Silicon Valley, they conclude that: 1) Silicon Valley is a network of heterogeneous and multiplex agents; 2) interactions between agents are multiplex and self-organized; and 3) it is a robust system able to withstand technological shocks.

## Media and social capital

In his essay *Bowling Alone*, Putnam (1995) claimed that 25–50 percent of the decline in social capital in the American people resulted from increased television viewing. Although Putnam’s observation has never been completely analysed, several researchers believe that the media’s effects on social capital are not as detrimental as he purported and that they depend on the content being consumed (Beaudoin and Thorson, 2004; Brehm and Rahn, 1997; Fleming et al., 2005; Norris, 2006).

Geber (2016) applied a context-dependent approach to the effects of media in national structures to examine how media structures influence social capital and how relationships vary based on individual context. This research finds that design decisions pertaining to platform architecture homogenize user behaviour and that social media allows users to visualize their network structures and search content without using their relational ties. These behaviours involve complex dynamics as citizens organize and preserve relationships in the built environment. As such, informational and entertainment media influence the attainment of social capital. Macro factors, such as media structure within a democratic country, also positively impact social capital, whereas participatory capital depends more on nationalized behaviours. The aggregation of multi-level social capitals, however, was found to be small across society as a whole (Geber et al., 2016). The conclusion of the article is that social media has a mobilizing effect in democratic societies where most people have Internet access.

## Society and social capital

This section describes how people experience “voice”, which is the notion of engagement and participation in society at large. Communicating as an individual on the Internet to an audience of family, friends, colleagues, or the general population requires confidence. The nature of participation and public engagement through the media is in flux. One anonymous scholar called the use of voice in social engagement a “free, virtually non-hierarchical tool for powerful applications for a talking – or a ‘typing’ … giving voice to counter discourses” (Cited in Careless, 2014, p. 50). For a citizen’s voice to be effective, however, an audience (not just one person) must be listening and acknowledging the messages internally for the conversation to transform into effective engagement.

Much of the literature on social media focuses on platform content. Tacchi (2011) wrote one of the first articles exploring issues of voice and the challenges of listening when creating open content in the realm of social media. The hype surrounding social media often assumes that an audience is present and listening. Although social media allows space for collective voices, it does not ensure that individual voices gain traction. Tacchi (2011) theorizes that voice is a process and a value. Content creation, as often displayed in social media platforms and online forums, challenges the concept of openness and voice. Whether online participation can enable the economically disadvantaged to participate meaningfully in the decisions that affect them is a relevant question in this context (Tacchi, 2011).

Tacchi (2011, p. 655) further argues that when voice becomes valued, “those frameworks for organizing human life and resources that themselves value voice as ‘open social arrangements.’” Once voice is valued by society, attention and response follow, rather than access and participation. The value of voice may be mutually registered through the process of listening (Couldry, 2013). When this happens, the quality of relationships between speakers and listeners mediated by new technologies also becomes important. A cyclical communication process occurs between individuals offline, although this process changes into a public discourse online where the individual is not always recognized. Diversity and finding value in voice require recognition and respect (Tacchi, 2011; Couldry, 2013). As urban municipalities and governments seek to engage the public on social media, whether all members of the online audience are valued equally remains unexplored.

Much research on governmental use of social media has focused on strategies and engagement processes. Lovari and Parisi (2015) instead define social media users’ motivations for connecting with the public through likes and follows. They assessed local governments in Italy, which use social media to “foster transparency and promote participation with public life” (Lovari and Parisi, 2015, p. 205). The authors define “digital publics” in which people use social media “to be informed and raise their voices toward public administrations” (2015, p. 207). This strategy significantly changed Italian public discourse, transparency, and relational practices among its citizens. Lovari and Parisi (2015) find that 33 percent of study participants displayed territorial identity and 13.5 percent copied friends who had already joined or accessed those same municipal social media pages. Information seeking was the most commonly identified user behaviour on municipal social media pages. Most study participants also cited that digital citizens believe that municipalities mismanage their Facebook pages and do not fulfil expectations. However, whether social media through the process of voice and recognition (as cited by Couldry 2013) provides any compelling evidence of social capital aggregation has not been proven.

Lovari and Parisi (2015) make several observations about Facebook activities of public municipalities. For example, women share posts on their walls more often than men, and men are more likely to comment on a post. This indicates women share information to a wider social media audience than men, but men contribute more to post conversations. The most active users on municipalities’ Facebook pages were in the 35–44 age group. Merchants, artisans, entrepreneurs, and unemployed citizens were the most prolific contributors, perhaps because these groups have opportunities to network during the day, thus they invest more effort in relating with the public and other civic institutions (Lovari and Parisi, 2015, p. 209). They conclude that social media is a useful public relations management tool and that city governments could interact with the digital public by engaging in timely two-way communication that combines accountability, including “channelling and visualising” user feedback.

Schweidel and Moe’s (2014) scholarship addresses the recognition portion of the communication process. In short, municipalities do not embrace a two-way symmetrical dialogue with the public. Rather, information is pushed outward from a central location, but the reception of that message (the sentiment) is rarely gauged or even received. Municipalities are not paying attention to their digital constituents (Lovari and Parisi, 2015; Schweidel and Moe, 2014). Nonetheless, “listening” on social media to gauge public sentiment has gained traction among individuals within organizations – as reflected by some answers received during interviews with public leaders from the Yorkshire region. Unfortunately, most of the literature regarding this subject focuses on public relations and marketing categories. With few exceptions (e.g., Schweitzer 2014), it remains mostly theoretical.

Schweidel and Moe (2014: 387) argue that social media constitutes a “valuable data source for both insights and forecasts.” Yet the volume of data collected by social media poses a complex challenge for those that try to listen and gauge sentiment. Listening is a “political action in its own right” according to Lacey (2013) She argued how the term “listening to the public” emerged from the days of radio broadcasting when listeners engaged in a shared auditory experience. Knowing what to listen for and, importantly, how to effectively absorb and respond to what is ‘heard’ constitutes the greatest dilemma for its users. Among the most sophisticated, savvy users listening appears to involve screening their feed to see whether something jumps up and begs for attention. Analytical tools quantify and distil the ‘listening’ into data. However, as it is qualitative in nature, these tools are not able to distinguish between value and posting behaviour (Schweidel and Moe 2014). Data may be presented in the following format with numbers to represent volumes:

* Positive comments
* Neutral comments
* Negative comments
* Products mentioned
* Attributes mentioned
* Website domains in which brand is mentioned
* Comments posted to blogs
* Comments posted to forums
* Comments posted to microblogs

Couldry (2010) posits that mainstream media fails to provide the means for people to give an account of themselves, which is the most valuable voice. He defines voice as: 1) socially grounded; 2) a form of reflexive agency; 3) an embodied process; 4) requiring a material form; and 5) undermined by rationalities (Couldry, 2010, p. 7). Media provides a platform for telling stories that affirm our humanity and longing for justice. These pursuits compete for attention, however, and many participants lack an audience. The ability to narrate, the practice of listening, and the perception of being heard have emerged as crucial aspects of social justice. Couldry (2010:127) cites YouTube as a valuable narrative resource, as it allows “digital storytelling that potentially provide important forms of self-validation, public recognition, and narrative exchange*.”*

For many authors (e.g., Nillson, 2008), the notion of recognition, redistribution, and justice are intertwined. However, media theorists argue that recognition occurs only when someone listens. I therefore focus on the ability to share a narration or stories via social media as a form of recognition.

## Capital creation and viral content

Social networks serve as pipelines and bridges in the digital economy by channelling information between people. One feature of social networks that has been identified in recent years is “buzz.” According to the Oxford living dictionary, Anon(2017) , buzz means “busy or moving quickly” and “a continuous sound.” These two definitions combined describe the urban media environment. Mould and Joel (2010) consider buzz to be a crucial concept in creative and cultural industries, particularly at the local scale. Bathelt et al. (2004, p. 38) define buzz as:

*“specific information and continuous updates of this information intended and unanticipated learning processes, in organized and accidental meetings … refers to the network of communication and information linkages which develop within a cluster. This occurs in negotiations with local suppliers, in phone calls … talking to neighbours … or when having lunch with other employees. The nature of buzz is spontaneous and fluid.”*

Grabher (2002) identifies it as an intangible quality often recognized in hindsight. Social networks thrive on maximizing potential buzz, “noise” (Grabher, 2002), or “project ecologies” (Grabher, 2004) of trends. Mould and Joel (2010) assert that paths of knowledge flows (buzz) within the advertising industry reveal the gatekeepers in a highly networked industry.

## The Knowledge City and the Informational City

Cities are currently experiencing phenomena whereby information and knowledge jockey for recognition among its industries and citizens. As the knowledge and information cultures struggle for phenomenological authority, researchers combine these concepts to make sense of the ubiquitous computing environment. As the geographer Derek Gregory states, “I find myself caught in the middle … sceptical of some of the assumptions and implications of postmodernism” (1994, pp. 317–318). Hence, scholars display similar scepticism regarding social media and the hype surrounding it. Social theories of the knowledge city require flexibility and encompass knowledge and information. Being in the middle, however, is a privileged position because most must use it to access quality education, jobs, housing, among others.

For many cities, tech infrastructure provides a legacy, but it often ignores scalability, adoption, and digital literacy rates among the urban citizenry. Much empirical research has linked the importance of electronic infrastructure and mobile networks to the “characteristics of the Informational City … determined by the pre-eminence of the space of flows over the space of places. By space of flow I refer to the system of exchanges of information, capital and power that structures the basic processes of societies, economies and states between different localities” (Castells, 1993, p. 136). In this view, the prototypical cities of the knowledge economy flow with information and override the space of places, so that the informational city surpasses the knowledge or creative city. Indeed, urban technology centres serve as hubs within these spaces of flows, with infrastructure, cognitive networks, dense spatial concentrations and digital connections with other similar hub centres (Castells, 2001).

With the advent of the Internet in society, much was written about the “death of distance” with all its benefits and consequences (Cairncross, 2001). Proponents of the Internet, broadband infrastructure and telecommuting, emphasize the death of distance and the potential for a placeless society which space contracts globally and where people have access to information at any time and in any location. Despite the anti-spatiality nature of this theory, the impact of relational proximities are nuanced and constitute a significant economic role in society (Tranos and Nijkamp, 2013). Rapid penetration of the Internet broadband and social media has brought the “death of distance” theory more keenly to the fore.

Urban spatiality hinges on the presence of relational ties and different dimensions of proximity for those that use social media. Tranos and Nijkamp (2013) outlined several types of proximity such as geographical, which does not always refer to physical distance. Proximity could also pertain to how a network is organized, and is therefore, relational in makeup. The image of the world as shrinking because relationships are visible at the touch of a smartphone denies the complexity of the spatial and over-simplifies the concept of place. Rather, economic activities continue to be based in the physical sense, dependent on infrastructure, its geographic position and the organization of people in space.

Former economic indicators predicated on industrial production are obsolete and should be replaced by a global space of flows, which provide an “information-friendly milieu” (Stock, 2011, p. 965). Whereas the significance of knowledge workers, network cities, and informational cities has been discussed at length, a composite definition has yet to be agreed upon in scholarly circles. Both knowledge society and information society share the following characteristics:

* Computers, mobile infrastructure, and other communicative technologies are important.
* Basic innovations are carried by resource information.
* Lifelong learning is essential.
* Information and content creation are always available.
* Digital information and networks play central roles as enablers.

Melzi (2009) claimed that the fifth Kondratiev wave was being carried by information and communications technology networks. This application of statistical economists’ views of cycles and waves showing growth and recession for periods of technology innovation, highlights how scholars struggle to conceptualize the significance of and implications for network infrastructure in society today. Lor and Britz (2007) contend that the knowledge society is based on four pillars: information and communications technology and connectivity, content and its usability, other infrastructure, and human capacity (e.g., skills and other social capital). This definition augments that of Stock by highlighting the need for human capacities over and above those of learning. The need for content to not just be available but usable also is reflected as being of importance. In the informational city, telecommunications networks connect workplaces, residents, and households. The penetration of networks and intensity of digital usage of those networks reveal the organization of the corresponding built environment and provides a public forum for city residents and visitors.

## Social network dynamics in cities

Geoffrey West, a physicist who has researched city growth, states that “cities are the result of clustering of interactions of social networks” (cited in Townsend, 2014, p. 160). City sociability and diagnostics, which include geographically tagged data, illustrate untethered urban mobility and communication. Gruzd and Wellman (2014) expect scholars will analyse the use of intertwined communicative media, shifting from media-centric to network-centric to focus on how people communicate. This approach considers how various media affect influence.

The most highly skilled social media users appear to “articulate their relational connections and view and navigate those connections” (Knapp et al., 2014, p. 280). The capacity to manipulate connections relates to an understanding of network structure*.* Similarly, how people establish and manage connections involves understanding which network content generates interest and the ability to understand how digital resources are shared and accessed through a network.

While corporations and their customers have experienced a parity in communications that has favoured the consumer on social media as the postings from a particular brand receive the same emphasis in a media feed as those from friends and family (Aula & Laaksonen 2010). The distance between personal and professional arenas has decreased substantially as a result. A strong link exists between the ability to be an economic consumer and online participation (Interview with Hannah Goraya #digitalinclusion researcher and social media maven 2014).

## Leaders, Influencers, and Gatekeepers

This section discusses the research into the behaviours and roles of those who act as “Leaders, Influencers and Gatekeepers” both in specific locations, such as Sheffield and in the online context. This group represents the recognizable in the urban environment. It comprises of the local household names, elites or prominent members of society for one reason or another. For some, social media and Twitter, in general, encapsulate a large amount of ‘pointless babble’ (Pear Analytics 2009). The value of new media therefore lies its ability to disseminate news and information to an audience. Indeed, this group sometimes listens to general community sentiment. It allows them to know how the community feels about particular issues of importance, and how they may be received by others regarding a decision of importance.

The network effect explains how messages of *‘pass-along value’* and ‘spreadability’ (Jenkins 2013) circulate. This leads to the question of who it is passed to and how it circulates. Michael Warner (2002) has explained the notion of the media ‘public’ in direct contrast with the concept of audience. In his view, the ‘public’ constitutes an imaginary relationship among consumers. Its essence occurs during a moment of recognition when one acknowledges the personal value in the act of circulatory interactions. This shows how recognition is a crucial element of how users acknowledge and validate one another in social media.

Dourish and Satchell (2011) conceptualise the ‘public’ relationship in social media as a 1) a relation among strangers; 2) ‘a social space constituted by the reflexive circulation of discourse’ (see Warner 2002: 90); and 3) privacy pivoting on both accountability and different forms of public life. In other words, social media is driven by collective participation and the bonds formed between networked people. Having a relationship with strangers feels uncomfortable and unsafe for the learners and thus becomes an additional dimension of exclusion among them. Social media’s value thus presents a constant cycle of *participation* and *recognition*. The subsequent recognition factor that occurs in social media provides insight into how different groups of people perceive their scope and sphere of influence. Recognition in this case also consists of validation of voice, visibility and presence within a specific realm. Some learners do not feel recognized online because their presence is forced.

It is hoped that this research will open up a discussion of how the digital divide may be further extending, by way of new media, to include the perception of local influence. As Habermas argued (1996: 30), the public sphere ‘cannot be conceived as an institution’; it is ‘a network for communicating information and points of view’ that ‘coalesce into bundles of topically specified public opinions’. Affirming these sentiments or opinions also constitutes both visual and vocal forms of recognition.

Research into the nature of public leadership and how it links to the urban context remain scarce. Hambleton (2014) calls for a new civic leadership in bringing about urban change. Much work needs to be done linking civic leadership to local behaviours and determining how it influences others. Social media networks serve as influential conduits for the public. Gruzd and Wellman (2014) argue that social influence has become a subtler networked influence. They contend that social media introduced new complexity into the study of influence, allowing the public to interact anonymously and asynchronously (Gruzd and Wellman, 2014). As a wealth of information is available via the Internet, mobile phones, and social networks, personal expertise becomes more empowered. As information proliferates, they posit that it is more challenging to influence personal choices and actions.

Social media consists of real-time, networked conversations between citizens. Networked gatekeeping describes how the public engages in conversations with influential members of society. It includes both selecting and shaping media narratives to construct a social reality (Xu and Feng, 2014). One aspect of networked gatekeeping involves information selection and how the sharing of Tweets or Facebook posts makes specific content more visible. Currid-Halkett and Ravid (2012) state that spatial concentration is imperative for gatekeepers to validate workers and the work of those who seek to mobilize their careers. In this instance, gatekeepers serve to validate and recognize members of the workforce. They represent a vital node between information, validation of credibility and economic opportunities. Dubois and Gaffney (2014) discovered that the number of connections on social media helps to more closely identify political elites. However, analysis based on the quality of messages and interactions were more likely to identity commentators and bloggers than the original creator or the actual member of a political elite. They also show a local clustering effect that detects important people within a specific community.

Social connectivity, as defined by “betweenness centrality,” and issue involvement also appear to be predictors of influential people (Xu et al., 2014). Betweenness centrality reflects a node’s centrality within a network. Within typical social network analysis, this betweenness is the shortest path between vertices as they pass through the node. Currid-Halkett and Ravie (2012) refer to this geobehaviour as a signal of status. The betweenness centrality thus coincides with the co-attendance network, which is the flow of talent from city to city and in another city. These hubs, or so-called star-markets, for particular industries, such as London for financial services, or Los Angeles for entertainment serve as centres for high concentrations of labour, social relationships, and their subsequent cultural institutions. The betweenness centrality thus facilitates flows through labour, social capital, knowledge, information, and influence paths.

Zhu and Huberman (2014) examine whether knowing online choices influences opinions. They find that people change their choices if faced with moderate levels of disapproval online. Meanwhile, Kwon et al. (2014) find multiple factors that increase people’s likelihood of joining a Facebook group. The strongest factor appears to be the percentage of friends who belong to the group, followed by being female and receiving a direct request to join the group. The researchers Welbers and de Nooy (2014) find that the likelihood of adopting a specific posting style on social media increases if “influential” posters use that style. In short, ideas, interactions, and content may all be influenced by those who are observed.

## Social network dynamics

Scholars have identified several behaviours and influential dynamics relevant to recognition and participation associated with social media. Xu and Feng (2014) analysed how direct Twitter conversations relate to gated networks among journalists and the public. They contend that gated networking provokes “deliberate and unintended behaviours that result in the shaping and changing of preferences, agendas and viewpoints” (Xu and Feng, 2014, p420). They also investigate how media proliferation has altered the power dynamics between content makers and consumers as they empower citizens by reporting and commenting (Xu and Feng, 2014). For example, retweeting or sharing information via a social media site makes content visible and shapes media narratives to construct a social reality endorsed by the gatekeeper. Traditional media dynamics, therefore, have shifted as social media allows the audience to “produce and broadcast their own messages, interact with keepers and to choose various content” (Xu and Feng, 2014, p. 421). According to Xi and Feng (2014), gatekeeping consists of any action that influences media narratives. They describe it as a political process that involves controlled sharing and competing for information. As such, the political power of the gated network reflects the “opinion leadership” in online narrative creation and visibility.

## Media Dialogue, Engagement, and Capital Creation

Around 10,000 papers have been published about media studies (see Schweitzer, 2015, p. 219). The effects have been measured in relation to context, format, message, and audience. The consensus is that media can influence sentiments, attitudes, and choices, including how perceptions of urban communities, class differences, and the use of clout in the public realm. For urban dwellers and their local governments, media remains a new domain that can influence how people perceive services. For example, Schweitzer (2015) investigates how public transport agencies use social media to influence user response, democratic engagement, and investment and find that support for public transport increased when agencies used their online presence to engage with the public. This is significant as transit agencies in the US have frequently faced reputational issues among the public as solely catering to either commuters or the poor. A transit agency using social media, therefore, is seeking to alleviate that perception.

Schweitzer (2014) makes several insightful conclusions about the role of social media in planning and how communication affects the conversation. For example, some transit agencies use a “blast” format for tweets, which conveys general information, such as “Remember: the station is now open for service.” Others offer an interactive dialogue format, in which an individual person tweets a message, such as, “Good morning! I am Annie from the social media team ready to assist you and answer your questions! Tweet us if you need us!” The blast format results in more negative discussions about the service provider. Schweitzer (2015) emphasizes the importance of conversational, two-way dialogue on social media. She encourages planners and agency representatives to “listen” to constituents and to show leadership in cultivating social media as a place for civility and reciprocal communication. Such leadership can result in more civility toward service users in general. In the United States, the public perceives public transport use as class-based, primarily limited to those living in poverty. Schweitzer (2014) finds that agencies that participated in dialogue-based tweets received fewer and less severe slurs aimed at public transport patrons. This stigma associated with public transport exists in nearly every US city; however, the negative perception of bus travel is beginning to change among people under 30. This issue with perception can be turned around by urban planners using social media thoughtfully to promote amenities and facilitate civic conversations and facilitate positive feedback, which bolster public agencies’ credibility and reputation. In this way, Schweitzer is acknowledging the importance of recognizing one’s audience, and the potential audience: who is on social media and how can we make the conversation more inclusive of others.

Ollier-Malaterre and Rothbard (2014) conducted a study on how people craft social media strategies and how this impacts their employer relationships and careers. They acknowledge that people face challenges in navigating social media use and note several ways that potential employees are judged positively or negatively by their social media presences. In the United States, 40 percent of employers use social media to screen potential hires for potential fit with the organization by assessing political affiliations, causes, hobbies, and interests on social media profiles. They find that successful candidates post about ten tweets per day, with a mix of professional and personal information and off-the-cuff remarks. They link to blogs, articles about specific topics, and photos. Less successful candidates post opinions that openly flaunt an employer contract.

Ollier-Malaterre and Rothbard (2014: 647) contend that social media has “a powerful influence in accelerating or crashing our careers.” One of the problems lies in the collision between professional and personal worlds. As the differences between “friends” and “followers” blur, it can be difficult to differentiate information disclosure from genuine interaction. As such, the information shared on social media is “persistent in time, presenting new connections with a flood of information that was not meant for this particular relationship.” This oversharing results in broadcasting information to an unintended, or invisible, audience. Moreover, this information remains easily searchable online. An individual’s online history also may be investigated by potential employers, managers, colleagues, and subordinates. For example, if an individual “likes” a New York Times article on poaching in Africa, that “like” becomes searchable.

Online interactions are devoid of visible social cues, such as facial expressions, vocal tone, and body language, help people respond appropriately to the message. As such, social media makes it easy to undermine the professional credibility of others because of a lack of context or an unintended interpretation. To leverage social media, Ollier-Malaterre and Rothbard (2014) recommend that employees and job seekers adopt a social networking strategy predicated around openness, audience engagement, content, and custom strategies. They also advocate using Facebook for either expression or impression purposes. Expression refers to providing an outlet for expressing your own personality, without targeting a specific audience. Impression refers to attempting to create a particular image of yourself within a particular audience who you are cultivating or targeting. Currying favour with an audience is also a strategic way to acquire recognition not only with your network, but with others as well.

Managing the boundaries between home and work is a necessary skill as the workplace continues to embrace mobility. Their work highlights the ways in which knowledge professionals and elites maintain their reputations in the new economy. It illuminates the pathways in which the workforce, encompassing both elites and professionals, must engage with social media to increase employment prospects and strengthen their public and professional standing. Managing one’s reputation both online and in person relies on leveraging a network effect of how information circulates, either positive or negative to gain recognition of one’s expertise and/or familiarity with a topic. These activities represent a form of visibility in a network, not voice.

## Social Media in the Neighbourhood

Some scholars report success in using social media in participatory planning activities (Evans-Cowley, 2010; Gordon et al., 2011). In these cases, it was used primarily to aid citizen input in formal processes. Johnson and Halegoua’s (2015) scrutinize whether social media attracted new and younger members to join and follow a neighbourhood association of 550 households in Lawrence, Kansas, a university town in the United States. The association had received only five Facebook likes and three Twitter followers. When asked to select the three best ways for the association to communicate, residents listed postal mail, email, and door hangers most often. Only 20 percent of respondents indicated Facebook, whereas 3 percent chose Google+, and 1 percent Twitter. Those that preferred social media as a communication tool cited convenience, cost, ease of use, and timeliness. Others complained that social media wastes time and feels intrusive or that they were already “super saturated.” Those who preferred the social media platform as a form of communication were most interested in having the neighbourhood organization.

Johnson and Halegoua (2015, p. 263–264) argue that social media can be an effective communication tool that requires little time and cost. However, it can also widen the digital divide if some residents regard it as exclusive. For active social neighbourhoods, social ties must be strong for social media to be used in these locations. Those preferring social media “may be the few but mighty ones most interested in a neighbourhood association … planning issues and events and willing to create social ties within their neighbourhood” (Johnson and Halegoua, 2015, p. 264).

Lack of social ties other than proximity can hinder a community organization’s successful use of social media. Additionally, as social media users tend to be younger with children, social media must be sensitive to their work and commitments. A feeling of ownership among residents may ensue if all participants share and manage content, feedback, and interactions. Email also should be used. If an organization no longer has relevant emails for its residents, the social ties become too weak to motivate neighbourhood participation. In short, effective social media communication is inclusive, discreet, and timely. The importance of persistent engagement was highlighted by Cabbidu et al. (2014) when they investigated strategies for managing social media by small tourism companies. They found that three distinctive types of communicative approaches were used to engage with clients: persistent, customized and triggered. They defined persistent engagement as maintaining an ongoing dialogue with customers and potential customers who may or may not be currently at the business premises. However, while using social media to expand participation is a noble goal, and may be successful in retaining the interest of participants, it offers little to underrepresented societal groups who struggle with self-esteem and confidence in the public realm. This confidence is crucial to feeling like their presence matters and is of some value to other groups also engaged in the planning process.

## Class Issues: Recognition among marginalization

Class analysis is a historically-rich field with perspectives on spatial inequalities that highlight stigmatization and marginalization. Matthews (2015), for example, discusses social media usage and neighbourhood belonging among social housing residents. He is sceptical that Facebook use can challenge the widespread stigma or generate community activism. He highlights persistent spatial patterning of deprivation and affluence within UK cities and identifies the state as the main actor in producing these concentrations (2015, p. 24). Matthews also states that social housing is often poor quality and concentrated in particular neighbourhoods that are already stigmatized. He cites issues relevant to social housing: residents’ perceptions that estates are divided into top, middle, and bottom categories; divisions between private, owner-occupied, and council housing; the creation of “supervised housing”; and poor housing management. The intersection between social media and feeling of belonging is crucial to the concept of recognition as it is predicated on validation, which in turn, evokes a sense of belonging.

Holgate et al. (2012) study minority ethnic workers in three localities in London. The authors assess how embedded individuals are in localized social and spatial networks and how these networks affect access to help with employment issues. They find that ethnic minorities tend to seek advice from family and friends. They also find distinct differences in access to advice on the civil justice system between black, Asian, and white survey respondents. Holgate et al. (2012) investigated why these differences among populations occur and whether community-based organizations have a role to play in supporting people in the workforce. They conclude that the duration of embeddedness of the migrant community and the relative strength of links based on kinship with respect to the presence of bridging and bonding capitals played a large part in this difference.

Relational ties influence community belonging and perceived status. By extension, these ties also influence one’s chances of being recognized beyond his/her small sphere of connections. Knapp et al. (2014) clarify how relational ties within organizations work against what he calls ‘perceived insider status’ (i.e. inclusiveness), belonging, and identity, with respect to workplace outcomes and that relational ties influence attitudes, intentions, and behaviours in communities. They find that belonging, identity, and psychological ownership predict satisfaction. However, their results imply that identity may not be as strongly needed by community members. This research is well placed within the field of organizational behaviour, as it applies to workplace and community dynamics that occur among IT users. Masterson and Stamper (2003, p. 274) define belonging as “the perception of an intimate association … as demonstrated by a sense of:

* Insider status (belonging) [also see Masterson and Stamper, 2002] personal space and acceptance that is independent from inclusion.
* Psychological ownership (citizenship/place making) – feeling that a group values a member as demonstrated by a sense of support. Policy disrupts this process in deprived communities.
* Community identification - self-definition in terms of the community.”

Knapp’s (2014) notion of perceived insider status represents a sense of belonging and inclusion within the community. Insider status fulfils a human need for inclusion, agency, and control. People who perceive inclusion accept responsibilities as an organizational citizen and are more likely to have positive attitudes about the community. They prefer to stay within the community and to support community functions, including innovation.

Psychological ownership signifies the practice of community members who perceive intimate knowledge of and investment in a population. This process of belonging and subsequent investment is called place-making. When this occurs, people take ownership of their communities and neighbourhoods. This ownership satisfies the human needs for efficacy, sense of place, and the rights and privileges therein, such as right to information, a voice in decision making, and the responsibility to contribute to organizational functions. Psychological ownership improves community members’ attitudes, satisfaction, and esteem. These inclusive community features occur when recognition has taken place within a specific community. The challenge, once psychological ownership has been achieved, is to branch out from the core community recognition to incur others’ validation as well.

Community identification indicates the perception of oneness with a location such that people define themselves in terms of it. It is strongly rooted in social identity theories and can involve shared history and goals. A strong sense of personal identity results in higher satisfaction, involvement within the community, expectations, and neighbourhood longevity. A perceived lack of status and ownership also influences community identification, because it limits authority and access to resources (Knapp et al., p. 276). This reflects one of the hazards to a community when it does not have outside recognition and flounders with perceived outsiders’ perceptions.

Research underscores the role of social connections across diverse domains of functioning including health. As Walter et al. (2012 p. 528) point out, when “social connectedness feels threatened, their ability to self-regulate suffers.” Perhaps the same is true for communities who feel threatened; it erodes their fabric across its social network. Thus, social connections remain an important component of human well-being, as connectedness can cause people to internalize the goals and motivations of others. Our inclinations, sentiments, values, and goals are strongly developed by social contexts. Walter et al. (2012, p. 529) conclude that belonging informs a central part of our self-identity, as people “readily adopt the goals and motivations of others … (which) contribute to social coordination and cooperation.” They also concede that “social-connectedness, even with unfamiliar others, can cause changes in the self, interests and motivation. This finding implies that long-standing relationships partners may exert a more profound influence on the self than is understood” (2012, p. 529). Motivation and influence thus occurs collectively among networks of individuals in social relationships.

The “community question,” as Hampton (2015) calls it, refers to the structural changes observed in communities as new technologies change how people interact. His research examines variations in context rather than issues of place to break from what he calls the “mobility narrative.” He posits that persistent contact and pervasive awareness drive the recent changes in how communities are structured at the meta and micro levels. In the past, many technologies offered mobility; however, social media allows relational persistence and sustained awareness of their ties.

Hampton (2015) defines pervasive awareness as short, asynchronous exchanges that result in person-to-network communication and a low social presence. These activities include both broadcasting and monitoring content. Pervasive awareness is usually employed by media consumers to address audience problems in person-to-network broadcasts by providing indicators or attentiveness and availability of social ties. Hampton (2015) also distinguishes between pervasive awareness and surveillance, which implies an informal watchfulness that was typical prior to the industrial era.

Persistent contact allows the accumulation of ties from local kinships, locality, and workplaces that would otherwise have been lost during relocation. Social media sustains these ties and articulates connections through institutions, information sharing, and interactive content. Hampton (2015) points out that these contacts may be maintained at a low cost. Persistence also may be unintentional, as social media often allows people to navigate through second- and third-degree ties and visibility. Awareness of others is sustained through mutual acquaintances, even when first-degree ties are severed. Hampton (2015) also addresses the problem surrounding the ability to gauge interest and attention in content through a broadcast. This issue is complicated by social media algorithms, which link to subsets of social ties. True audience size and attention to content are thus indeterminable. Content may be monitored online by number of reposts, comments, or likes, which may be equivalent to feedback. Hampton (2015: p. 245) calls this reception loop an “awareness of awareness.”

**Status and reputation**

People aspire to increased social status, just as they aspire to wealth, health, better job prospects and political power. This quest for status affects social disparities and resources within society. On social media, there are dimensions to the allocation of public visibility and voice, particularly among the knowledge professionals analysed in this research. Furthermore, status and reputation are tied to the concept of recognition because these terms assume a foothold in a social, hierarchical structure. Before I discuss social stratification of social media based on what circulates, status in this context requires further definition. Status occurs when an individual within a social network likely has achieved credibility and a respected reputation. Ridgeway (2013) contends that status is a micro motive for behaviour and is as significant as the drive for money and power. In society, the status has the potential to stabilize resource inequality by transforming it into cultural status beliefs and judgements about who has the most esteem of perception of competence, and even authority. Status beliefs may also appear as a bias in work, school and even online settings.

In a study of the social stratification of fame, van de Rijt et al. (2013) found that the bottom of the public attention hierarchy exhibits a fast turnover; however, once status is achieved in the upper segments, stable recognition of a known entity persists at a fixed rate for decades. Achieving fame and recognition among a group in the media world appears to be strong with a long duration even when it is perceived to be ephemeral in nature. Once an individual’s name is decoupled from the first infusion of monetization, public attention undergoes a self-reinforcing process. Van de Rijt (2013) also found that 1) herd dynamics exist among audiences; 2) bandwagon effects occur with the diffusion of stories; and 3) copycatting (such as memes) may fuel constant media attention and public discussion. This occurs even in social media, but instead of using traditional forms of media and journalists, the organizational hierarchy starts with a gatekeeper.

Part Four: Theories of the Digital Divide

A number of issues complicate how research has addressed the digital divide. When one considers the access narrative, industry considers this a closed topic, and scholarship has analysed it extensively. As social media pervades as a type of stereoscopic communicative device at the same time communities are left trying to gain some attention to their problems in an age of austerity, where does the concept of recognition fit into the wider frame of the digital divide? Recognition comes back to perceived insider status, psychological ownership and belonging. WIRED magazine (2013) stated that social media “at its best has given a voice to the disenfranchised” (https://www.wired.com/2013/07/ap\_argshaming/ accessed: 17June 2017). This statement gives the impression that the digital divide no longer prevails and that the underrepresented have found a place for them on social media. Trying to determine the significance of technology in terms of social change and social equity remains a challenge for techno-evangelists. Forms of disadvantage mutates as the digital media becomes more ubiquitous and pervasive to the masses. Past scholarship has focused on the typical offline axes of inequalities such as race, gender, class, and the traditionally underrepresented. More recent research points that the need to understand individuals’ digital footprints as evidence that may be generalized to a larger aggregate of individuals, thus representative of a larger population group (Robinson et al 2015).

Disadvantaged groups present less intensive Internet usage which, over the span of one’s life course, contributes to an ever-widening digital footprint gap. Robinson et al (2015) call for future scholarship to build on what is already known in relation to health care, economic inequalities and those associated with the traditional axes often seen in the social sciences: race, gender class and disability. Dahlberg (2015) calls for an expansion of digital divide research into the empowerment relations flowing from the use of social media platforms, not just from the context of users. In other words, he highlights the need to consider the context of the platforms which facilitate social media communications and how they shape capital resources and accumulation. He puts forward that the structuring of these social networking sites serves to organize social, cultural and political and economic relationships and are largely overlooked.

Digitally excluded people in the UK are missing out on strengthening their bonding capital by keeping in close touch with family and friends via email and social media. They also miss out on opportunities to **save money** on food, energy, general household items, access to vital government services and the ability to enjoy the many online sites which serve a range of hobbies and interests. In other words, these activities are important aspects of living happily within modern society. Many of the learners I interviewed pointed this out. However, the issue is much more multi-faceted than simply accessing computers and broadband. It is emerging as a vital component to the economic survival for all socio-economic groups in the UK.

This research addresses the social media dimension of the digital divide by assessing whether the participatory nature of social media has narrowed or widened the divide. Social media has changed how people interact with technology and is worthy of analysis. Media consumption is interactive, collaborative, multi-layered, and networked. This new media culture has penetrated the lives and daily habits of people globally using a platform-based ecosystem of connective media. This section explores techno-cultural and socio-economic aspects, which contrast sharply with social media’s ideological principles.

The digital divide was identified in the 1990s as scholars realized the revolutionary potential of the Internet and wondered how a lack of access and resources could affect socio-demographic groups and individuals. This notion that technology could be revolutionary is not new; indeed, a causal relationship has now been established worldwide. Rather, particular localities contain several variables of demographics, capabilities and opportunities that lead to numerous outcomes. For example, Sheffield, England, was a world-class steel centre that has sought to transition to a “Digital City” by focusing industries on industries with products such as software, video games, music, film, websites, and apps. In the United States, Oden and Strover (2002) crucially demonstrated the contributions of computer-based information and communications technologies to economic growth. The relationship established at this point hinted at a contribution, but it did not definitively establish one. Whitaker (2014) studied the rural urban digital divide in America and noted that it was not access to broadband technologies that bridged the divide, but rather adoption of technologies.

The 2002 version of the American national assessment studies, A Nation Online (NTIA, 2002), highlights the growing acceptance that computers and Internet access were important despite a lack of data to prove it. The question of whether to acquire a computer or pay for Internet access was eclipsed by the presumed or obvious benefits. Policies and programs to close opportunity gaps in certain social groups were discussed. Physical access to computers and the Internet played a key role in these early conceptualizations of the digital divide, and other issues were ignored. As Warschauer (2002: p. 7) points out, “issues of content, language, education, literacy, or community and social resources” were not part of the discourse. Access issues drove policies and programs that sought to give technology to demographic groups on the wrong side of the divide. I call this access and availability gap “level one” of the technology divide.

For the purposes of this research, different levels of the digital divide have been identified. Each level builds on the previous. Level one features the early years of Internet adoption in terms of access and skills. For those beginning computer classes, this represents where they are when they start to take the first step toward usage such as learning how to write and send emails. Level two occurs when a user has both broadband service and knowledge of how to navigate the Internet confidently to achieve daily tasks either at home or in a work environment. Level three develops when an individual not only uses the Internet confidently, but uses it to connect and engage with others on a regular basis with social media. Lastly, level four represents when knowledge and information gains allow a user to discern what type of activities other users are engaged with and make judgements on that basis. For example, a fourth level user may notice that a certain colleague switched his/her LinkedIn profile to “seeking other opportunities”, so the user infers that the colleague is job searching.

Servon (2002) argues that technology access gaps are one of many causal factors that create disadvantages among certain populations. She anticipated much of the research of the past decade that examines the resources, skills, and literacies that enable or deny computer and Internet access. Persistent poverty and inequality are at the root of such divides, and although technology cannot solve such problems, it can “help to show the way out” (Servon, 2002). Yet, access alone may not be enough to eliminate differential advantages associated with opportunities to use technology. Even with access to technologies, divides may be inevitable. Servon’s (2002) research paved the way for a broad understanding of the divide to include digital literacy and meaningful use of IT. I call this the “first level” of the divide which coincides with access issues.

The second level involves both digital literacy and social inclusion. This may be defined as the skills and knowledge enabling computer and Internet use. For example, Prensky (2001) is credited with coining the terms “digital immigrants” and “digital natives” to differentiate between those who taught themselves the Internet versus those who were immersed in Internet culture since birth. Internet usability became a significant factors linked to non-adoption in the 2000s (Hargittai, 2008; Van Dijk, 2003; van Deursen and van Dijk, 2011; Mossberger et al., 2003; Mansell, 2002; Gangadharan and Byrum, 2012). The original access divide (first level) remains relevant, although it is more geographically isolated, and it has evolved for some researchers into one defined by skillsandmeaningful use (second level). Media theory about the second level echoes that of Mikami et al. (2010) and Newton (2014), who contend that social media non-adopters tend to be introverted with few offline friends and few strong friendships.

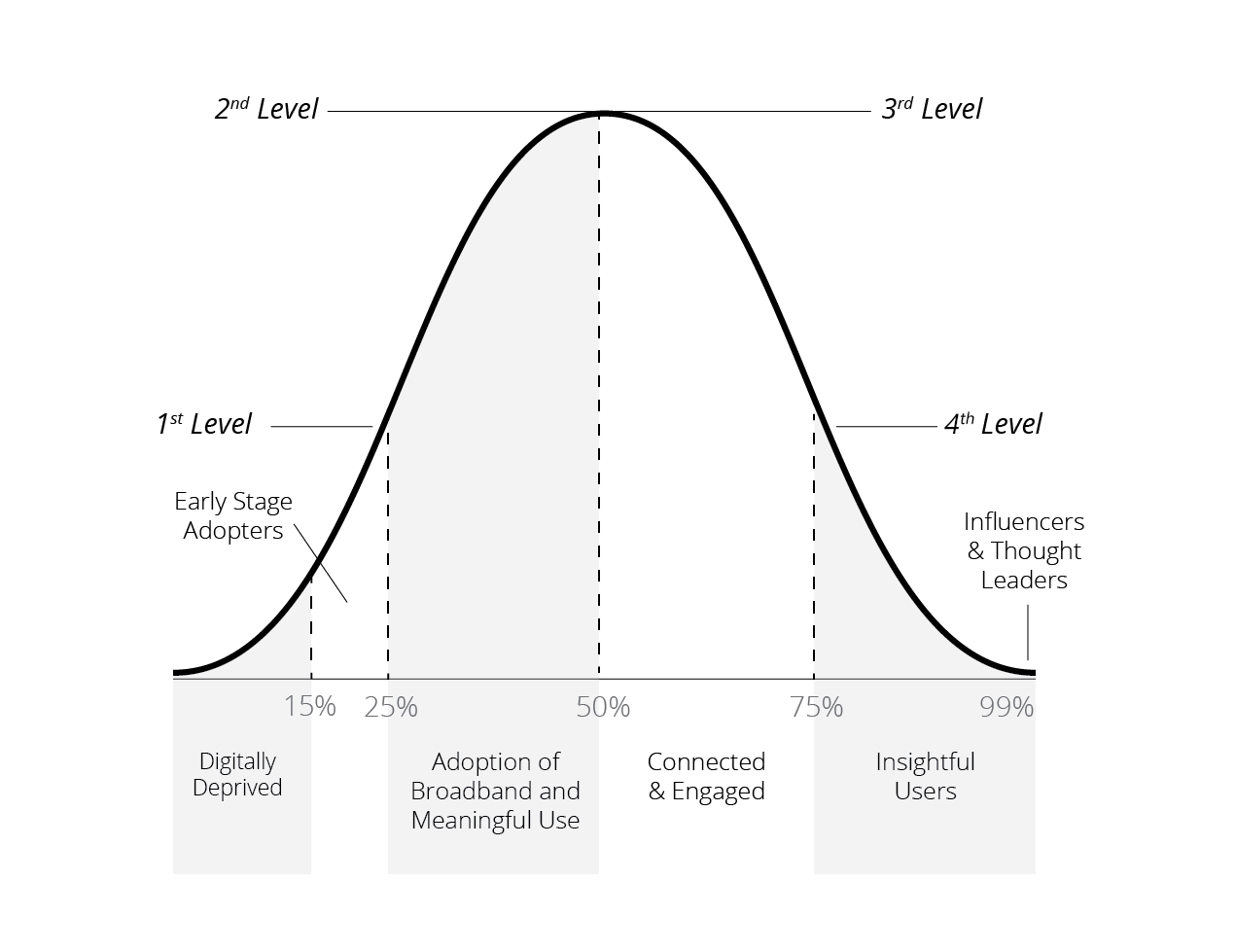
The third level theory combines several literatures investigating the diffusion of innovations, the uses and gratifications of media, and the knowledge gap and usage gap theories. The diffusion of innovation describes the incremental process by which technologies are adopted by people (Rogers, 1995). Adoption rates for any technological change follow an S-shaped curve that begins slowly and accelerates if the innovation is useful (Rogers 1995). This theory also postulates that compared to early adopters, late adopters are less educated, less affluent, less active in their communities, and less socially mobile. The following diagram illustrates the levels of the digital divide and their corresponding skills:

Figure 2: Social media skill curveshows a rough estimate of what percentage of the population falls into each Level of the Digital Divide. It also depicts the percentage of the population which fall into each Level.

Figure 2 depicts a bell curve of the estimated populations in each level of the digital divide. It references the four levels of the divide and is derived from research carried out by Rogers (1995) referring to technology adoption lifecycle. It maps the digital divide levels onto a standard technology diffusion curve as presented by Rogers (1995). An individual begins life without digital technologies, effectively unaware of any of the levels of the digital divide. Those children who grow up in houses which are digital natives will probably never experience level one or two of the digital divide; as their parents will guide them straight to being connected and engaged, as they are. The segment of the population that exists between digital deprivation and meaningful use of technology are just beginning to gain skills and access to the Internet. The second level begins once access has been established, after which the adoption of broadband and digital literacy occurs simultaneously. The third level begins with empowerment and requires the individual to be connected and engaged. Individuals “living life online” through media (Rheingold, 2013; Newton, 2014) have entered the fourth level, where online and offline identities merge.

The users and gratifications perspective put forward by Rubin (2008) and extended by Eastin et al. (2015) emphasizes the personal motivations behind Internet interaction, including socialization, entertainment, and information seeking. This theory hypothesizes that non-adopters do not possess the social connections that may otherwise motivate them to use social media. Hence, non-adopters may not want or need to keep friends under surveillance and have less need for online affirmation. Ellison et al. (2011) contend that social media mirrors the bonding capital already in existence and thus strengthens the social capital bonding relationship. This theory may be interpreted another way: Non-adopters may be less motivated to grow their social capital or the benefits of social ties through social media because they perceive little value in the activity.

The knowledge gap and user theory, on the other hand, posits that “as the infusion of mass media information into a social system increases, segments of the population with higher socioeconomic status tend to acquire this information at a faster rate than the lower status segments, so that the gap in knowledge between the segments increases rather than decreases” (Tichenor, Donohue, and Olien, 1970, p. 159–160). The flow of knowledge thus varies by social class due to difference and inequalities in social structure, education, and communication skills.

The uses and gratification approach to understanding media consumption provides another framework for theorizing about the digital divide. If audiences (or consumers) seek media through a complex set of social and psychological motives, then the audience believes that there is a certain desired outcome, or gratification, associated with selecting one form of media. Scholars and media analysts use this expectancy framework to predict user adaptations and likelihoods. Eastin et al. (2015), who study media consumption among various ethnic groups in the United States, suggest that research into the digital divide must strive to “get ahead” of disparities using the predictive framework, rather than examine what has already occurred. This framework provides a novel approach, particularly for urban social sciences, because it considers both traditional and new media. They argue that it is important to understand media consumption patterns to gain perspective on how these gaps develop.

As the digital divide persists, concerns have arisen about how different segments of the population use media. Van Deursen and van Dijk (2013) find that people with lower educational attainment and people with disabilities use the Internet more during their spare time than both higher educated and employed populations. They identify several differences in internet use between population subsets. Their conclusions refute prior theories of the digital divide that focus on the importance of attitudes, access, skills, and types of use, and they challenge the claim that the divide no longer exists.

Van Dijk (2005) concludes that motivation, access, and skills are necessary but not sufficient for Internet usage. Brandtzaeg (2010) and Zillien and Hargittai (2009) advance this theory to define specific skills and the nature of Internet use. More recently, Van Deursen and van Dijk (2013) have sought to determine relationships between socio-demographic variables and the amount and types of Internet use, finding that use may be determined by content (e.g., broadband, active, creative, and consumptive), frequency, length of time, and types of activities performed online.

The gap in Internet use is not like a knowledge gap (van Deursen and van Dijk, 2013). Whereas the knowledge gap refers to the “differential derivation of knowledge from the mass media, the usage gap is a broader thesis that potentially is more relevant to society with regard to differential uses and activities in all spheres of daily life, not just the perception and cognition of mass media.” The usage gap remains a complex matter caused by “societal tendencies and technological characteristics.” (van Deursen and van Dijk, 2013). The technological characteristics include the “complexity expensiveness and multi-functionality” of the Internet, which invites different uses (van Deursen and van Dijk, 2013, p. 509).

Van Deursen and van Dijk (2014) evaluate seven use clusters, including information, nets, personal development, commercial transaction, leisure, social interaction, and gaming. They find that age and gender are more reliable predictors of differences in usage than experience level and income. They also find that those with lower education spent more time online in their spare time and those with higher social statuses used the Internet in more beneficial ways. Those that occupied more privileged positions in society reaped more benefits from their time online than those from lower socio-economic backgrounds.

As the Internet matures and reaches more people, it increasingly reflects social, economic, and cultural relationships in the offline worlds (van Dreusen and van Dijk, 2014; van Dijk, 2005). According to van Dreusen and van Dijk (2014), higher status members of society also gain access to more information than lower status members. Thus, the Internet not only reproduces social inequality, but it may serve as an accelerator (Witte and Mannon, 2010). Unlike traditional media, socio-economic status strongly related to informational use of the Internet, suggesting that the digital divide matters more than the long-established media divide. This is particularly relevant, as the Internet serves more functions than traditional media.

**Digital divide in the workplace**

According to the Good Things Foundation (2014), most learners are either over forty-five or immigrants. Vroman et al. (2015) proposed a model of older adults’ digital technology use. An individual’s unique characteristics, needs, attitudes toward technology and the capacity to use it all became primary components. Olphert and Demodaran (2012) highlighted the disadvantages experienced by the ‘digitally disengaged’ population. This group consists of people who used to be online, but have subsequently ceased their activities. They found that this happens when they made the decision to stop the activity or when factors in the participants’ external environment caused them to cease to be engaged such as retirement or job loss. Another external factor also consists of ceasing to be in a work environment or holding a job that does not require computer usage. The differences in computer usage in the work environment matter greatly to the future job prospects of the workforce in the UK.

## Social media and the divide

Level three of the digital divide generally refers to empowerment. This level of the divide has been developing over the past ten years with the growing prominence of social media and a networked culture. It moves beyond the meaningful use and literacy theory to encompass engagement, participation, and knowing how to use online tools and information. Rheingold (2014) calls this mindful use of digital media and lists five fundamental digital literacies of the information age: attention, participation, collaboration, critical consumption of information, and network smarts.

Social media in the scope of level three of the digital divide pertains to engagement and the beginning of creation through knowledge. Social media has exploded onto the scene as the leader in user-generated web content over the past decade. Rey (2012) describes a Marxist view of social media and how it destroys workplace contract boundaries between person and employer. He links the structural conditions of digital economy profitability to workforce alienation and exploitation. The media industry operates non-stop and thus people are encouraged to consume and interact with it as a “material commodity” in a “cattle-like existence" (Rey, 2012, p. 399). His theoretical framework is predicated on overproduction and overconsumption of digital information. The seemingly voluntary use of social media suggests that users are not alienated by its proliferation, but the nature of work is changing and the rise of social media echoes that change. He defines exploitation of workers in the digital economy as “the degree to which the value of labor input by the social media user exceeds both the production costs borne by the owner and the use value that social media provides the user” (Rey, 2012, p. 415). When companies profit from their employees’ social media use, minus its derived value to the user, exploitation occurs.

Age is the most reliable predictor of social media use, with 18 to 34-year-olds comprising the highest concentration of users. However, Bobkowski and Smith (2013) find that social media use among young people is not universal and that the rate of adoption appears to be plateauing. Social media non-adopters tend to experience economic instability, fractured educational trajectories, and social isolation. They depended on relatives and lacked motivation to find and keep jobs. Most non-adopters lived with parents or relatives at some point. Their economic circumstances were strained from taking care of dependents and from unstable and temporary working. Many stated that they did not have time to create and maintain social media profiles. Jobs in kitchens and customer service desks also tended to prohibit social media use at work. They conclude that many are left behind in the wake of these technologies and there remains a dearth of literature about this subject.

Bobkowski and Smith (2013) theorize that because schools facilitate the social transmission of trends, such as technology diffusion (see Rogers, 1995), a lack of education therefore may cause some to lose out on social media adoption and its accompanying skill base. A lack of self-belief in one’s own tech skills also hinders the uptake of social media among some non-adopters. The non-adopters also typically did not receive formal qualifications at a secondary school or university, and some dropped out of school to pursue unconventional programs. Participants expressed the value of completing their education, despite many obstacles.

Many non-adopters had weaker relationships with parents, fewer friends, and smaller social networks and ties than adopters. Bobkowski and Smith (2013) report that many study participants spoke about difficult family relationships and dysfunction. Non-adopters’ tenuous economic situations made maintaining friendships very difficult. Many relied on few (or no friends) and lacked connections from activities like clubs, sports teams, or other social groups. Limited social ties also impacted adopters, as social media allowed them to maintain and develop friendships. This is significant, because previous research suggests that social media positively affects bonding and bridging social capital (Ellison et al., 2011).

The implications for social media non-adopters appear to be vast. Bobkowski and Smith (2014, p. 778) characterize social media as an “accessory of privilege.” Non-adopters have disadvantages that constrain their positive development and well-being. Compared to adopters, non-adopters are more likely to take on adult roles earlier and to disrupt their education, and they are less likely to have steady jobs. They concluded that non-adopters “seemed immune to the benefits of growing their social capital through internet technologies … their non-adoption appeared to be both an outcome of and an additional contributor to their disadvantaged positions.”

## The “always on” lifestyle: toward a fourth level

Several theorists (Rheinhold, 2013; Lee, 2013) ascribe to the “living life online” idea, which consists of two strands of thought. The first revolves around an online/offline lifestyle practiced by some Generation X and many millennials in which members suffuse the Internet with personal information and content. For some, this activity is mindful, but for others, it is in response to the need to engage with society through digital tools. In April 2012, IBM identified four emerging digital personalities with their corresponding population percentages (see Lee, 2013, p. 149): content maestros (35%), efficiency experts (41%), social butterflies (15%), and content kings (9%). Efficiency experts are proficient Internet users who demonstrate meaningful use literacies. Content maestros consist of gamers and media consumers. Social butterflies use social platforms such as Facebook and Instagram prolifically. Content kings are media consumers and creators. In short, life online is as real as life offline both psychologically and physically. Content maestros and social butterflies reside between the third and fourth levels as insightful users, whereas content kings and other gatekeepers lay the foundation for the fourth level.

This change is significant because it represents a trend toward complete information awareness on the part of content kings and media corporations. As Lee (2013, p. 154) points out, “Facebook knows who, when and where” on the macro-scale, whereas the individual still resides in the micro. Information awareness encompasses the relationships between how we handle our personal information, including privacy issues and big data generation; our awareness of it, including Rheinhold (2013, p. 88) refers to as “turning on your crap detector”, and how we live online and offline, including a network of nodes and spatial configurations. Internet literacies, including pervasive awareness of social networks along with the ability to use the information gathered from this use most accurately describes the fourth level of the digital divide.

## Conclusions

This chapter incorporates a number of issues surrounding social media usage pertinent to Sheffield, England. The idea that a community, or a person, seeks recognition was first introduced as a concept to illuminate how it links to the act of using social media platforms. Social media unfolds as a platform-based activity that seeks audience participation and serves as a gateway to a number of social capital elements of primary importance to both people and their communities. For instance, the notion that social media may influence economic opportunities such as the ability to find and apply for jobs is explored in depth.

Underpinning the ability to find a job using social media, however, lies the intricacies of social networks: their ties, types and how they interact based on relationships and the formation of social capital. Reams of data are therefore produced on social media reflecting relational proximities, interactions and networks which actually illuminate within which communities a person belongs, how s/he gains status and reputation. This occurs under a backdrop of a storytelling narrative that is shared with a network of individuals. Social media is built on this premise which leads into how it fits into the digital divide literature.

The digital divide consists of four levels which are detailed within this chapter. Those levels correspond with very distinct features of how people use, or have access to, new Internet technologies. The fourth level of the divide, which has emerged more recently, revolves around the idea that people are able to be more aware of information around them as spread by content creators. In short, users are insightful and able to intermesh their ability to generate content with socialization in general. This contrasts sharply with people who represent the first and second levels of the divide. In these instances, people are working toward not only sustained Internet access, but also meaningful adoption of the technologies available to them.

CHAPTER 3: CONCEPTUAL FRAMEWORK OF DIGITAL INTERACTIVITY SPECTRUM

This Chapter serves to define the methodology utilised and the design for the research performed and is separated here into four sections. The previous chapter reviewed different notions of the digital divide theories behind social media usage and network evolution through collective behaviour. This chapter will explain some key initial themes from the literature, which guide the selected interactivity and social capital tie-based conceptual analytical framework. This leads to an explanation of the logic behind the research design: why interactivity and what does it show? How do social network ties illuminate the ways in which Sheffield’s population cohorts may use valuable capital resources? The research aim and steps are also refined into more penetrative empirical questions. I follow these explanations by describing how the location in Sheffield, England provided a fertile base to understand the contextual environments from which computer learners, knowledge workers and elites must navigate to develop an online presence. The interactivity framework, coupled with a social network ties index, is also explained in this chapter. Section two also provides a rationale for the research design, which employs both social media effects and spiralling capital deficits amongst three socio-economic groups in the Sheffield context.

The case study of Sheffield with its computer learners, knowledge workers and elites is also introduced. This section also offers an analysis using mixed qualitative methods for the study of media effects and community capitals as a research method. The fieldwork was undertaken during a period spanning 20 months, from early 2012 to late 2013, across three Sheffield socio-economic groups: social housing residents connected to Heeley Development Trust (learners), knowledge professionals and elites.

Part One: The Conceptual Framework of Interactivity

The framework proposed on the next page serves to indicate how social media interactivity funnels through different steps ultimately to generate presence. Chapter 2 discussed ways in which social media networks, social capital and voice have been conceived through a variety of theories. Since social media’s inception, pundits have boasted of its transformational qualities. In short, online interactivity is important (Sundar et al., 2015 and Lowenthal, 2010) as it provides a foundation from which to nurture the potential for social presence. The change in the process of communication, from one of transmission to one of exchange, has created novel theoretical discussions. The new frontier of interactivity “epitomizes the promise of media technologies to capture the essence of interpersonal communication. Historically, concepts of dialogue, mutual conversation and feedback have dominated theories and models of interpersonal communication” (Sundar et al., 2016: 43). Human computer interactions comprise of an entire field of study. In summary, the concept of interactivity has been operationalized as a construct containing one or more elements such as two-way communication, multimedia display, areas of personalization (Wu, 2006), user control, responsiveness, features of reciprocity and synchronicity (Voorveld et al., 2011) (see Sundar 2016: 599).

Sundar (2016: 599-600) has discussed another approach to defining interactivity ‘as any type of action possibilities provided by the system’ (Boczkowski and Mitchelstein, 2012; Jensen, 1998; Liu and Shrum, 2009; Lombard and Snyder-Dutch, 2001). In order to further this argument, he states that interactivity may also impact perceived involvement, mutuality and individuation in the interaction. Similarly, Sundar (2007) argues that contingency can be designed into a media interface, in order to imbue a sense of back and forth and interconnected interaction necessary for heightened user engagement with the content. Such heightened engagement could in turn lead to other cognitive, attitudinal and behavioural outcomes. In this vein, when interactivity is self-reported, or self-described as in this research, actual interactivity and perceived interactivity could indeed be two different concepts.

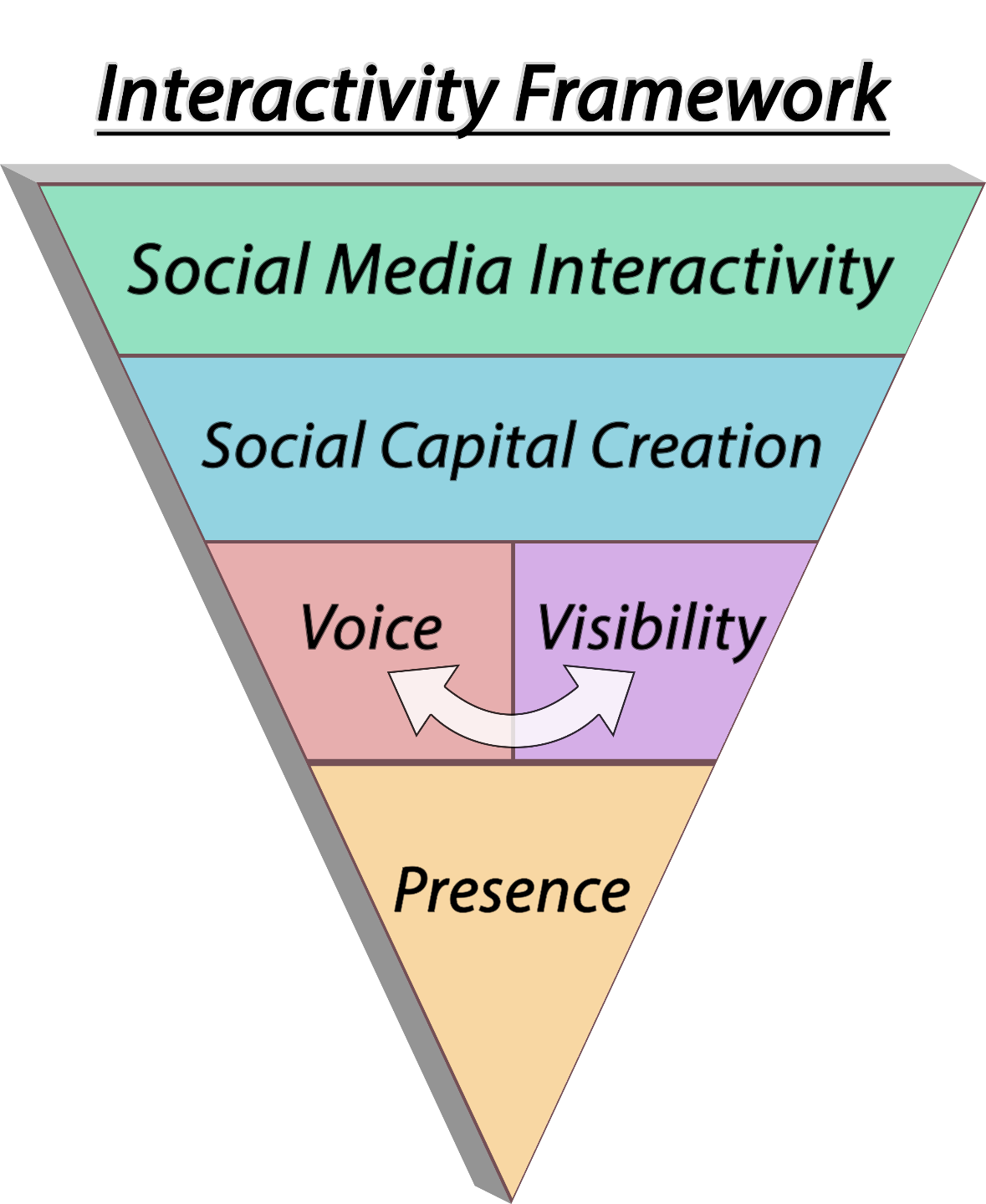


Figure 3: Social Media Interactivity Frameworkshows how social media interactivity ideally transforms into social capital through forms of either visibility or voice to create the concept of presence**.**

The idealized Interactivity Framework, shown in Figure 3, demonstrates how social media interactivity acts as a filtration process to important forms of capital. This process is entirely dependent on building and engaging with a social network. Thereby the interactivity with the network generates social capital. The social capital, in turn, becomes either an expression of voice or visibility, or a combination of both visibility and voice. Both visibility and voice are necessary components to the creation of a social media presence.

The framework is illustrated as a funnelled distillation process because social media interactivity does not necessarily produce voice, social capital or presence. Indeed, each step cannot exist without one embracing the preceding stage. For example, one cannot demonstrate either visibility or voice without both social media interaction and social capital creation. The funnel is also necessary because it generally requires a lot of social media interactivity in order to produce either bridging or bonding social capital. Likewise, it takes a significant amount of capital creation to generate a voice and/or visibility, and so on. Each level requires more activity than the previous in order to be produced.

The notion of voice and visibility, a by-product of interactivity, has given rise to the assertion that the power of social media lies in its ability to empower. One US teenager (Samantha Goodyear, [http://www.huffingtonpost.com/samantha-goodyear/the-power-of-social-media\_3\_b\_5161138.html March 5](http://www.huffingtonpost.com/samantha-goodyear/the-power-of-social-media_3_b_5161138.html%20March%205), 2017) summed up her experience in the following way:

*“The youth of today have a voice like we [have] never [had] before. Social media can be an awesome environment to encourage each other, communicate with people and share our stories. Social media gives us a chance to reconnect and keep up with old friends and friends that live far away. It gives us the opportunity to share our stories and get our opinions out there. Having the freedom to say what we want on the Internet makes us feel heard. That can be such a powerful feeling, and I think it’s a really important one for teenagers to have.”*

The sense of empowerment this teenager articulates raises the spectre of what constitutes this power of voice and visibility and how this dynamic expresses itself through the individual or collective online presence. The question of power Samantha raises is not as important as her search for recognition and value as an active participant in society. She uses key terms which represent her need to be validated such as ‘share’, ‘opinions’, feel ‘heard’ and ‘have a voice’. Unravelling threads rooted in network and presence are some of the only ways to begin to interrogate the puzzle of place through social media. The characteristics of interactivity and social capital provide the rationale for this research. Uncertainty exists over what is possible and probable. Indeed, Samantha’s quote reveals her lack of confidence in the communicative dynamic, a diffidence which most users certainly share.

However, individual actions can be used to tell a collective, societal story—one where people often seek out environments that reinforce personal values. Those ties that either bridge, bond or link choices to their values are now more visible thanks to social media, which allows us to establish ties -‘likes’—at the click of a button. Others may see these ties, even if they are superficial or aspirational. Indeed, sociologists have analysed how these ties behave in a network and ask whether they act as a contagion (are they influential and spread?) or are homophilic (do the ties match personal choices and traits?). Accounts of social influence, predicated on networks and ties, rely fundamentally on imitation, persuasion and so on—the vectors by which beliefs and behaviours spread through a population (Shalizi and Thomas, 2011). This view suggests that networks provide the structure to enable ideas to spread, but the ties between people allow them to reach a final destination. Social media interactivity, therefore, incorporates several types of user-user interactions that satisfy the need for a different level of involvement or relations (Grabowicz et al., 2011). User-user interactivity is, however, ill-defined.

The levels of interactivity observed amongst the participants in this study have been assigned to five categories. Overall, these individual categories have not been used before in tandem, although other research has investigated them individually.

Infrastructure category is concerned not only with the issue of access to broadband and IT equipment (Norris, 2001; Warschauer, 2004; Hargittai, 2001; Graham, 2001), which has been well documented in the literature, but also how and what platforms are used. Information awareness is a necessary component in the interactivity framework because it broadens the way information is synthesized and collected (Gottschalk, 2009; Clarkson, 2007).

The Networking and engagement category takes its roots in the idea of citizen engagement to decrease bureaucratic inefficiencies, (Shah et al., 2008; Hanzl, 2007; Deuze, 2006).

Representation and Identity suggests that social media serves as a space where participants may freely align themselves with chosen values, politics and emotions (Ellison, 2007, Tarlo, 2010, Schwartz and Halegoua, 2014). It refers to how and why social media participants choose their visibility to project specific underlying messages to others.

Lastly, Sociability describes the conversational element of social media. Sociability describes the responsive of the individual social media user. It refers back to Lowenthal’s (2010) definition of presence, see p. 3, and the online responses generated by the user. Replying to messages generates an ‘ambient awareness’ of issues that stretches globally. This concept was developed in the social media literature (Keitzmann et al., 2011).

In fact, the field of communication and media studies contains a rich and diverse body of literature, which supports both positive and negative relational effects of media use referring to interactivity. In this field, term ‘media effects’ refers to the attitudinal or behavioural outcomes of media use on the user. Media effects include a variety of traits such as influence, reciprocity, trust, visibility, altered socialization, editability and association (Slater, 2007; Treem and Leonardi, 2012). These media user behaviours ‘change to emphasize the relational character of affordances which are constructed not only between people, but also the materiality of the things with which they come into contact’ (Treem and Leonardi, 2012). Social media allows users to be visible. In other words, their information is readily available and requires little effort to locate. Information such as behaviours, tasks and knowledge are theoretically available for others to uncover. This web of media effects is part of ‘general systems theory’, which in turn is part of the ‘mutually influencing media selection and effects processes’ (Slater, 2007: 284).

One scholar proposes a ‘reinforcing spirals’ framework for understanding media selectivity and effects as ‘dynamic, mutually influencing processes’ at the *individual level* (Slater, 2007: 282). This theory is significant because it attempts to explain the influence of mediated communication on socialization and the importance of emerging cultural capitals, which are a by-product of social media and Internet usage.

The selection of and attention to media content creates spirals ‘akin to positive feedback loops’ (Slater, 2007). These spirals generate community capital through relationships built on trust, influence, reciprocity, social identity, strength of path or network. This model is based on the premise that ‘the content of one’s media environment will influence one’s beliefs and values across the population’ (Gerbner, 2002: 46). The use of spirals does not assert that media influence is a key factor; it does, however, draw attention to the tensions and competition between group perspectives. This is especially useful when drawing out the competing interests amongst three different socio-economic groups.

Part Two: Research Aim, Steps and Research Questions

The purpose of this research is revealed in the aim, steps to achieve the aim along with the key empirical questions detailed below. The interactivity spectrum framework allows an exploration of the different methods citizens use to engage with social media amongst the three socio-economic groups interviewed in my fieldwork. A spectrum provides a basis from which to analyse the empirical evidence. It brings out the characteristics that underpin and influence levels of interactivity amongst the cohorts. Social media usage and intended outcomes will reveal how interactivity is shaped by outside factors. The framework provides an idealized notion for social media communicative processes in which every possible benefit may be derived from its utilisation. Based on the literature review, the development of this framework guides the more penetrating empirical questions that are honed from the more general research objectives (Yin, 1994). The purpose of developing an interactivity spectrum is twofold: it provides a broad understanding of media activity amongst groups to reveal skill levels and gaps and it also seeks to unpack the ways social capital forms and trickles down to form crucial resources that professionals and elites learn to utilize effectively offline.

Aim and Research Questions

The aim of this research is to understand the spectrum of interactivity in social media usage as it presents amongst Sheffield residents, as well as how it fits into the progression of the digital divide. This project asks the following questions:

1. How does individual/community social media interactivity affect the ability to accumulate and use social capital?
2. How does social media affect the importance of voice and visibility as an effect of networking behaviour?
3. How does social media affect the way networks and connections are formed and maintained amongst Sheffield’s residents—specifically, how are these networks structured from an individual standpoint; and
4. How does social media affect the way literacy and social capital intersect through the activation of a social media presence?

These research questions stress the need to analyse how social media interactivity prompts the resources which help residents buffer the social and economic headwinds. This includes looking at what factors support the ability to use social media at both the community and individual levels. The second question delves more deeply into how social media interactivity influences the formation of important aspects of social capital through a filtration process. Lastly, the third question is concerned with how the interactivity spectrum may be used to refine the definition of the digital divide. In these cases, the spectrum demonstrates the range of linked, interactive behaviours, including traits and other indicators. This is used to analyse an array of variables which can be linked to the social media experience. A spectrum model of interactivity presents the optimum way to show the diversity of experiences along a continuum toward an idealized strategy which maximizes social capital and metaresource accumulation. The Oxford English Dictionary, Anon(2017) defines a spectrum as being ‘used to classify something, or suggest that it can be classified, in terms of its position on a scale between two extreme or opposite points’. Merriam Webster (2017) defines it as a ‘continuous sequence or range’. The inferred model will show how social media interactivity encompasses a full range of the skills, activities and strategies employed by Sheffield’s residents. The types of interactivity will be compared amongst socio-economic categories. This will determine how interactivity influences the generation and use of social capital amongst Sheffield residents.

In short, these research aims and steps, as a course of planned actions, reveal a basis to further understand how Sheffield’s residents use social media. These objectives will be further evaluated based on a devised spectrum. This method will showcase the striations present in the interactivity levels across the city of Sheffield during this data collection period. The range of interactivity will also reveal the diversity of activities and motivations of social media participation. It also seeks to highlight at what point capital is created on the spectrum, or whether voice and visibility merge to form a new type of social capital.

While this research does not answer direct questions regarding technology development, the socio-economic lens of capital flows, combined with media effects, provides much needed insight into how community sentiments and behaviours have adapted to an age of ‘total information awareness’ (Rheingold, 2012). Urban environments are currently saturated with information, and it is by understanding how people use social media to establish and maintain relationships that we can understand the digital skills that are in use.

**Step 1**: Evaluate Sheffield residents’ social media interactivity through the lens of computer learners, knowledge workers and global elites. What factors shape social media interactivity? Develop a spectrum for each group and then combine them into one to show which types of interactivity provide the greatest impact on the generation and use of social capital.

**Step 2:** Explore how social capital contributes to the concepts of visibility and voice. A series of spectra will allow evaluation of how, and at what point, the formation of capital develops into these two important media effects. In addition, it will show how separate voice and visibility spectra need to merge—and at what point—in order to develop an influential presence.

**Step 3**: Draw conclusions on the nature of the digital divide present in Sheffield, based on digital interactivity and the interviewees’ ability to harness visibility and voice as presented in the spectra on the divide. Using spectra through plotted diagrams will tease out the relationships individuals have with technology and other factors, such as social capital development and amplification of presence offline.

**Step 4**: Make distinctions between digital skills, ability to network effectively and social presence online. Which skills are most crucial to the digital age?

Part Three: Using an Interactivity Spectra as the basis for analysis

Interactivity with social media serves as the crucial pivot for this thesis. It concerns a form of online engagement that is both reactive and proactive in nature, meaning Sheffield’s residents have a variety of motivations for pursuing social media interactivity. Tensions between social media activities clearly exist amongst residents. For example, some residents feel compelled to use social media because the consequences for nonparticipation are judged to be too great a burden. This circumstance occurs when a resident feels compelled to use social media in order to survive. This is due, for instance, to changes in the administration of benefits or access to housing. The interactivity framework puts forward a way of addressing the motivations for social media engagement amongst computer learners, professionals and elites—it is a common variable amongst all of the residents in this study, and it provides a way to gauge variables that propel the digital economy.

The motivations, and what is gained from their various levels of interactivity, drive the formation of social capital. The interactivity of social media participants drives social capital creation; which, in turn, produces voice, visibility or both as a media effect. When both voice and visibility are utilised on social media, influential metaresources, such as validation and recognition, have the potential to cascade within this idealized framework. While not completely employed by every Sheffield socio-economic group or resident, the dynamics are 3521 Shady Lake Dr, Westfield, IN 46074 well understood amongst most knowledge professionals and elites. In essence, this framework provides a guide to savvy social media usage, although social capital generation from interactivity is a net effect and not necessarily under the control of the participant.

The spectra values are generated from the textual analysis of the interview data, based on identifying the number of instances where an interview participant discussed a category within the identified spectra. Both positive and negative references were tallied for each group, and then the number of references were averaged against each cohort’s sample size. This effectively considers the variations in size for each cohort. This average was determined by dividing the absolute number of responses in each interactivity category by the number of participants in that group.

To take account of the positive and negative references, each positive reference was given a score of +1 and each negative reference given a score of -1. Individual graphs showing the positive and negative responses are highlighted in each section devoted to learners, professionals and elites.

## The Social Media User-Interaction Spectra

One of the primary features of social media is its capacity to promote interactivity through networks. There is an increasing social expectation that people should interact online not only with each other but also with government institutions, nongovernmental organizations and civic groups—rather than rely on face-to-face, or even telephone interactions. Actors use these tools in multiple ways, but there are very definite strategies that people employ in their social media engagement. These fall into the following groups of interactivity depending on social medium and access (Balduini et al., 2013; Canter, 2013; Mossberger et al., 2013; Mitchell et al., 2013; Omillio-Hodges, 2014; Ariel and Avidar, 2015; Carr and Hayes, 2015; Ouirdi et al., 2015; Valenzuela et al., 2016):

* Technology platforms and data linkages
* Information awareness
* Networking and engagement strategies
* Representation and Identity
* Sociability

This research will evaluate the interactive nature of communication tools presented by interview participants in terms of their interactivity, whether pertinent or banal in nature. This will enable a determination of the ways that interactivity is being shaped throughout the city and how its citizenry is engaging within informal, personal and reciprocal approaches via a variety of social mediums. It should be noted by the reader that the aforementioned categories do not stand alone; there is naturally some overlap between them. For the purposes of analysis, and to differentiate the myriad of intentions amongst social media users, they are demarcated into distinct groupings. These thematic categories were selected based on notions explored by the literature about social media effects in the past few years. Based on the observed interactivity amongst Sheffield’s residents, I have developed a thematic spectrum of interactivity from which to analyse behaviours and motivations. Interviews with residents provide insights on opportunities from and challenges to using social media. Each thematic area is expanded to include an exploration of its defining characteristics and how the observed interactivity will be analysed and categorised. The Interactivity spectra categories are discussed in the following paragraphs along with their defining characteristics.

**Data and Linkage** infrastructure in social media encompasses mobile infrastructure and data driven changes (Carr and Hayes, 2015). The technical infrastructure, which underpins the Internet, including social media, is changing how we access systems and how these systems operate. The diffusion of smartphones and mobile devices is facilitating access to social media via applications and direct interfaces, frequently bypassing web browsers. At the same time, the systems underlying the Internet are evolving into data-driven tools utilizing complex algorithms and computer power to scan and synthesize immense amounts of information across multiple databases. (Twitter, for example, recommends accounts users may want to follow based on previous patterns of use.) Platform tools are therefore becoming more adaptive and knowledgeable, with a touch of personality built into their systems. The lines between human and automated are becoming blurred. When I evaluate interactivity for its infrastructure, this seeks to identify which social media modes and access forms are most popular. Consideration will be given to how users link their data by employing hashtags or whether any automatic, timed and pre-set methods are set up to ‘push’ messages.

**Information awareness** through social media challenges traditional notions of how audiences gather information via a central authority. Anyone with an Internet connection may participate in information sharing in the public domain without having to rely on a gatekeeping process for access or contribution. Social media contains an abundance of information (Ariel and Avidar, 2015) which is transmitted and assigned meaning by receivers. However, it should be noted that not all information requires the same amount of cognitive effort to produce and consume. In the realm of social media, the relationship between interactivity and information increases in importance as the ability to manage information along with social relationships become intertwined. The concept that information constitutes a communicative process between a sender and receiver is the primary focus of the media studies discipline. Online users of social media play an influential role in spreading and amplifying content. The curation and monitoring of information has become a central activity in the process of pushing information to an audience. Information management methods are analysed here in terms of topics and subject matters that are frequently shared by members of Sheffield’s public.

**Networked engagement** fundamentally concentrates on the response side of content. For example, does an audience member like a post or comment? Has another person contributed a comment, or shared the post with a member of his/her network? This category is more focused on how content spreads and is shared more widely through a chain of contacts. This also includes how content is pushed and pulled through a network (Mossberger et al., 2013). For example, in a governmental department, content from Facebook or Twitter may be pulled by public relations specialists to determine sentiment amongst the local citizenry. When back-and-forth interaction is encouraged between two or more entities, this represents a networked strategy on the part of at least one of the communicative partners. The networked strategy aspect consists of the most popular interactive engagement and participation feature of social media. Collaboration and cooperative work also form part of this group activities. The analysis will explore how this strategy comes into play amongst Sheffield’s population.

**Representation and** **identity** may be characterised as a thematic area in which people are encouraged to ‘lead by example’. Each person using social media becomes an ambassador not only for their individual preferences, but also for their employer, their educational establishment/history, their political/social causes and even their cultural tastes. For example, a Sheffield resident may ‘like’ the Arctic Monkeys or ‘Our Cow Molly’ on Facebook and this online association indicates a way to promote not only their city and their tastes, but also themselves. Hence, a feeling of cultural belonging is constantly flagged and perpetuated by this process of media disclosure of social associations. In some instances, employers or brands monitor their employees’/followers’ profile preferences. This raises questions of privacy and security that will also be explored in the analytic chapter based on this theme.

**Sociability** is a category devised based on the sum of social media activities combined with offline behaviours which support the online activities. In short, it constitutes ‘everyday talk’ and mirrors offline verbal replies. It is the means by which individuals perceive and understand relational norms through the way speech is regulated on social media. This thematic area features all of the previous categories and is a way of discussing how they reiterate feelings, perceptions and encounters with others. On social media, for instance, there is a movement to generate rhetoric through positive messaging. This occurs when a Sheffield resident conveys loyalty to his/her city by discussing the city in mostly positive terms. However, this research carefully avoids basing sociability completely on available tech features used by mobile devices or apps. For this reason, sociability activity may be combined with offline behaviours. This form of normalizing online talk does have numerous negative consequences that researchers have discussed (Omillon-Hodges et al., 2014), such as misleading information messaging, a sense of injustice, unfairness or dishonesty in the way that reality is construed and a superficial or partial view of transparency.

## Spectra Development and Guidelines

This section discusses how and why interactivity spectra are developed using qualitative research methods. The spectra focus on five key facets of interactivity across the three socio-economic cohorts which participated in the research. The interactivity facets are viewed and judged on a macro-scale rather than the micro-level detail present in much of human computer interaction research. The spectra are based on 5 key facets of interactivity—a very macro approach, in which each cohort is graded based on my judgement of behaviours/actions based on interviews. Prior research on human-computer interaction focuses on interaction techniques and the design, prototyping and evaluation of user interfaces with a blogging tool, or with a health care company homepage for example. In these instances, the researcher typically examines past webpage activity. In audience studies, researchers have primarily focused on the different stages of the communicative process which would include the number of minutes spent on a website, number of visitors to the website and so on (Jensen, 2012: 153). The use of spectra in this case is designed to distil socio-economic behaviours down to orders of magnitude. In other words, it is an instrument illustrative of the nature of interactivity within Sheffield. It is indicative of what I found, based on interviewing participants. This method does not suggest statistical rigor, and may not be accurately duplicated. It does, however, provide an infographic that supports the analysis. All interview transcripts have been coded (axially) and validated based on the interactivity categories presented earlier. Axial coding allows broad themes to be explored as subthemes when employing open coding. Each interactivity parameter will be evaluated on a scale each positive reference was given a score of +1 and each negative reference given a score of -1. In order to take into account the differences in the number of group participants, the score was then averaged.

Each interactivity category will be aggregated and assessed on the whole for each socio-economic group participating in this study. For example, on the whole, where do knowledge professionals sit on the spectrum in terms of their pervasive awareness? How does each of the cohorts rate against each other and where does the interactivity digital divide actually begin? Importantly, these factors will be judged equally important to full participation in the digital economy. Thus, by transposing the narrative onto an analytical framework often used in quantitative research, the study may determine the variables which may contribute to identifying Level 4 of the digital divide.

This method builds on the conceptual framework with the idea of presence to illustrate the ways relational ties (either bonding or bridging) function both online and offline within Sheffield. The nature of these ties indicates the strength of the relationships and networks present between residents. It also highlights the importance of ‘voice’: the process by which people individually and collectively express sentiment in words by linking it to media interactivity. Media provides a tool that allows effects, attitudes and beliefs about services, people and places (Schweitzer, 2014) to magnify beyond their direct relational ties. Therefore, subject articulation, juxtaposed between both targeted and unintended audience, matters to the ability to develop metaresources, such as the ability to influence or develop a reputation in different neighbourhoods in Sheffield.

A road map of how social media interactivity develops from voice and visibility and culminates into presence will be presented, along with how they will be applied and their empirical limitations in this chapter. This social media framework unveils the ways in which individuals compound their interactivity into generalized community-wide characteristics, assets and their metaresources. In short, the process reveals the dynamic media process perceived by each community group.

## Social capital as a result of interactivity

Much attention has been given to the role social capital plays in the Internet age (Wellman et al., 2010). The notion may be described in two ways: 1) it serves primarily as a public good, rather than a class good (Lin 1999, 2000; Huysman and Wulf, 2004) or 2) it involves official languages, organized behaviours which contribute to the formation an identifiable culture along with a high level of exclusion (Bourdieu, 1998). It follows, therefore, that digital inhabitants, who invest themselves online, generate a level of social capital that exists and is ‘exchanged online’, have been overlooked and misunderstood’ (Julien, 2015).

If one considers social capital to be a public good, then it depends on a high level of good will from individuals who invest and sustain the collective resources of a specific venture. Norms, values and trust form necessary portions of this conception of social capital. Granovetter’s (1973) strength-of-weak-ties contribution focuses on how these portions work to disseminate information and ideas essential for further action. His analysis of bridging and bonding ties has also influenced how online interactions have been regarded and evaluated in the past. The distinctions between both bridging and bonding capitals are important for social media interactions, as well, because it hinges on norms and networks as preconditions to knowledge sharing activities. The problem with the conception of social capital in terms of its applicability to social media is that individuals need a compelling reason to contribute their own resources to the collective, rather than act in self-interest. Putnam, Jenkins and Wellman (2003), on the other hand, contend that social capital and online interactions are evidence of a convergence culture (Putnam, Jenkins and Wellman, 2006). This convergence exists within the minds of individual consumers and through social actions with others. Its existence is not motivated by the presence of imposed authority, values, norms and trust. Rather, interactions occur due to the sheer volume of information, further necessitating a communal form of ‘intelligence’ otherwise called ‘collective intelligence’ (2006).

Wellman (2003) contends that people no longer mobilize into compact and dense groups; instead, they have shifted to a form of ‘networked individualism’ which is sparsely knit, fragmented and loosely bound.Within the framework of networked individualism, the person becomes the foci—rather than work, family or any other collective unit. These individuals also look for others who are similar in terms of social, emotional or economic indicators, and connect, rather than embed, within the group. Networked individuals constantly create online content with other individuals in order to expand or communicate the collective knowledge. Importantly, Rainie and Wellman (2012) contend that Internet interactions are informal, lacking rules or an obvious hierarchy. Julien (2015) claims these assertions are incorrect and that the online interactions of digital inhabitants are fraught with exclusions and conflicts in terms of who has the ability or inability to act in particular, sanctioned ways online. In other words, his point of contention surrounds how people differentiate and achieve distinction within online culture. Julien disagrees with Wellman’s assertions, arguing that digital inhabitants have created their own boundaries and rules online, ones which are not always well negotiated. Knowledge may be concealed against those who do not have the distinguishing capabilities necessary to perceive specific knowledge. Neither do they interact to share knowledge to work toward a common goal or solve a problem. Instead, they interact online merely in order to interact with one another as they exist in social space (Julien, 2015: 362). These rules, parameters and structures exist online to both include and exclude people from participating or understanding a clearly identifiable culture. Bourdieu’s (1998) theory may also extend to social media because in this space, individuals make judgements of distinction and carve out a unique habitus in order to create content and share what they perceive in the world.

The following chapter examines how social media interactivity at the individual levels leads to social capital resource accumulation and the process in which this occurs. In the process, a conceptualization of social media framework is developed to explain the transformation of the skills, access and confidence that make up social media usage into the development of social capital based on as-yet-undefined metaresources at the individual and community levels. This metamorphic process begins with interactivity using social media, which in turn filters and develops into social capital. The social capital lens places emphasis on its conceptual construction, derived exclusively from the resources embedded with others in form of bridging or bonding relationships. These relationships symbolize relationship ties of some kind. Finally, social capital assets produce a mediated effect of voice and visibility, to the extent that these are magnified within those two contexts. Finally, the presence of voice and visibility gives way to capital development at the community or individual levels. This, in turn, links back to the tie embedded within it.

## Social Capital and Tie Framework for Analysis

As discussed in the literature review, bridging social capital focuses on external relationships (Adler and Kwon, 2002). Bridging capital is often referred to as ‘weak ties’ between individuals (Putnam, 2000). These often form between individuals of different geographic, socio-economic and employment backgrounds (Islam et al., 2006; Carter and Maluccio, 2003). ‘Weak tie’ relationships appear to lack depth and may be considered to be provisional (Williams, 2006), thus making bridging social capital may be described as fundamentally ’heterogeneous’ in nature (Putnam, 2000). Bridging social capital between individuals allows for useful information and new perspectives to be exchanged; it frequently lacks any type of emotional supportive mechanism (Granovetter, 1983; Williams, 2006; Ellison et al., 2007). Granovetter (1983) postulated that individuals with ‘weak ties’ may be able to draw from a more expansive set of information and greater access to opportunities such a better housing or jobs. He argued that this phenomenon, albeit founded upon a weak connection, generates a type of strength otherwise known theoretically as the ‘strength of weak ties’ (Granovetter, 1983). It has also been suggested that social solidarity may also emerge from the presence of weak ties (Adler and Kwon, 2002). Bonding social capital, on the other hand, exists between family members, friends or neighbours and sometimes colleagues. These focus on internal ties between individuals, generally homogenous in nature and inclusive (Morrow, 2001; Adler and Kwon; 2002). These relationships may draw on strongly knit, sometimes overlapping and emotionally close associations (Williams, 2006; Ellison et al., 2007). Bonding relationships provide required emotional support, trust and frequently transmit behavioural norms between individuals who form the relationship (Islam et al., 2006). The type of relationships that operate within a social network determines the types of social capital formed in these structures (Williams, 2006). ‘Strong tie’ relationships or bonding social capital does not provide links to individuals of diverse backgrounds (Williams, 2006). Bonding social capital is essentially embedded in people’s daily social practices and relates to personal connections and relationships (Smart, 1993; Chung, 2006). Bonding capital is crucial to the completion of tasks in daily social life. Further, its influences on individual holders may be both positive (i.e., reciprocity) and negative (i.e., nepotism).

## Linking Social Capital to Interactivity Online

This section seeks to build on the knowledge outlined in the previous section to develop a framework around the interactivity categories of bridging and bonding social capitals. It compares three types of social media (LinkedIn, Facebook and Twitter) that differ in their main purpose and platform architectural infrastructure, but share the qualities of visibility, voice and social association. The focus of this is not only the interactivity of these platforms, but the social capital benefits. In the first step, the effect of using (vs non-using) the three platforms on sociability, informational awareness, networked engagement, infrastructure, identity and representation benefits is examined. In the second step, a deeper analysis is conducted by focusing on the actual usage that matches the sociability, informational awareness, networked engagement, data linkages, identity and representation benefits categories within each platform. A similar approach has been taken by Valenzuela et al. (2009) to examine the effects of Facebook use on civic engagement and trust. Utz (2016) also examined the informational benefits across these three platforms.

I will now describe each platform and how they will be evaluated from a three-prong perspective: interactivity categories, Sheffield cohorts and social capital benefits which come from specific platform use. Each interactivity category will be evaluated in terms of whether bridging or bonding social capital benefits are experienced. Many of the knowledge professionals engaged in discussions about LinkedIn, for example. What types of comments did they make about it in terms of social ties? Who did they connect with and did they reap any benefits from this connection? Does posting about work and strategically selecting ties on LinkedIn provide any informational or sociability benefits?

On Facebook, many profile fields provide information on hobbies, favourite TV shows and causes important to the individual, such as the RSPCA. Other personal interests, such as staying in touch with family and friends, become a main driver for use (Ellison et al., 2007).On LinkedIn, the sole focus lies in professional life (Papacharissi, 2009). The profile fields resemble the categories of a CV and do not allow space for hobbies or favourite TV shows. On Twitter, there was very limited space for profile information and tweets were limited to 140 characters at the time the research was conducted. Beginning in 2016, however, Twitter began allowing 240 characters per tweet. All three feature asymmetric networks. Twitter is frequently used as a ‘friend-following’ network (Utz, 2016) or as a news and event-following medium (Rogers, 2014). In order to build upon the theorization of social capital developed by Adler and Kwon (2002), one of the many sources of social capital lies in the content and structure of an individual’s network. When it comes to overall professional benefits, a platform that provides work-related content and access to a seemingly unending stream of weaker ties in the relevant discipline should result in higher informational, sociability, network strategies, identity and representation benefits.Papacharissi (2009) demonstrated that LinkedIn has a strong professional focus that offers little space for non-professional use. This reduces the potential number of users in Sheffield significantly; nonetheless, every knowledge professional interviewed for this research mentioned LinkedIn to me. People are also more likely to follow colleagues, former colleagues and ‘influential’ people in their business networks than on Facebook (Utz and Muscanell, 2014). Utz (2016) found that users add more weak contacts to their business network than to their Facebook account (Utz and Muscanell, 2014). The structure and content of the social networks people maintain on LinkedIn likely provide social capital benefits. This framework will delineate what those benefits are to users.

The same arguments, although to a lesser degree, may be made for Twitter because it is primarily used as a broadcasting medium and for interacting with friends (Archambault and Grudin, 2012). Zhao and Rosson (2009) found that microblogging via Twitter helped to create awareness of what colleagues are working on. Morris et al. (2010) reported that IT professionals used Twitter for asking technical questions, but used Facebook for asking questions pertaining to home or entertainment. This evidence indicates that Twitter use has at least some positive effects that are the result of social ties. Facebook, on the other hand, offers two possible lines of reasoning in terms of its benefits to professionals. Skeels and Grudin (2009) found that Facebook was used for keeping in touch with colleagues. Regularly reading colleagues’ status updates was perceived as increasing tie strength and trust. Trust is identified as an important enabler of knowledge sharing (Levin and Cross, 2004); Facebook use could thus increase informational and networked strategy benefits via increased trust. However, most posts on Facebook are about everyday activities with a strong focus on positive and entertaining aspects (Barash et al., 2010). Facebook users mainly ask questions about home, family and entertainment (Ellison et al., 2013; Morris et al., 2010) as it provides light conversation one may relay to a neighbour offline. The social capital effects of usage relevant to each interactivity category will be assessed. Social media content and networks will be evaluated on the basis of how participants described the motivations for their connections: both with whom and why. This will consider whether participants indicated who they followed and allowed into their networks, who responds to their content online, or the reason for generating specific content—is it strategic in nature?

**Social Structure and Tie Analysis and Social media: toward a model of understanding the transactional relationships in Sheffield**

Social network analysis is merely a tool which is used to gather and analyse data to explore the degree to which each connection connects to each other to form the structural makeup of collaborative relationship (Scott 1991). The basic assumption of social network analysis comprises of the notion that relationships matter and may influence each other, ideas and other immaterial resources flow through connections and the structure of relationships may have consequences to how they form to embed within a system.

Social media networks offer unparalleled opportunities for analysis both quantitatively and qualitatively. As the focus of this research seeks to interrogate the social media interactivity of three cohorts based on interviews, the social network analysis also depicts facets of connections and relationships. These relationships will be represented in the form of network models which show who learners, professionals and elites prefer to connect with what types of organizational entities, friends, colleagues and others. In addition, the ties and tensions will be examined and illustrated between each cohort, using a generic representative model, depending on the following features (Quinton and Wilson 2016):

• relational or transactional exchanges

• emergent or strategic developments

• norms of sharing and reciprocity

The model will be representational in that it does not focus on one particular person, but the relationships described by each cohort and the form that it takes online, whether there is tension, reciprocal actions/reactions to explore the nature of the relationships modelled. For example, all the groups use Facebook, but in a multitude of ways. How these connections manifest will be explored using positive and negative links. The network models for each group may be compared and contrasted. This network tie structure represents the support each cohort receives from the social groups and supportive services available to them. It was developed using qualitative data that’s been generalized to fit a cohort. Each node will be connected by ties. The ties will represent groups, institutions both public and private. Are the ties one-directional, undirected at all but in close proximity, and valued? How do these relationships influence or contribute to social media interactivity?

The final category called Sociability which will be featured in the Discussion of Findings Chapter. It represents the culmination of each cohort’s social media activities along with their offline behaviours which support the online behaviours. In short, it constitutes “everyday talk” and mirrors offline verbal interactions. It is the way that individuals prompt relational norms through the way speech is regulated on social media. This thematic area features all of the previous categories and is a way of discussing how they reiterate feelings, perceptions and encounters with others. On social media, for instance, there is a movement to generate rhetoric through positive messaging. This occurs when a Sheffield resident conveys loyalty to his/her city by discussing the city in mostly positive terms. However, this research carefully avoids basing sociability completely on available tech features, which are used by mobile devices or apps. For this reason, sociability activity may be combined with offline behaviours. This form of normalizing online talk does have numerous negative consequences which will be discussed further (Omillon-Hodges et al 2014) such as misleading information messaging, a sense of injustice/fairness, dishonesty the way that reality is construed, and a pseudo view of transparency.

**Empirical Limitations**

Social media, as a platform, appears to offer transparency to these relational networks—either real or imagined. If social relationships or ties cannot be harnessed by a particular social group, these do not represent true social capital (Lin, 2001). While Putnam (2000) draws firm conclusions on how social capital relates closely to ‘civic virtue’, this social capital growth is more easily accessed when already embedded in a network of reciprocal relationships (Andriani, 2013).

This research seeks to make the process of social capital and digital interactivity more transparent. However, in doing so, it has had to group individuals into cohorts which sometimes masks the struggles people face at the singular level. It also seeks to understand status and how this is conferred within groups, how group structure and composition matters to visibility and voice, and also issues of employability. The scope of the study covers a lot of topics to show how the nature of the digital divide has developed to encompass almost all aspects of learner’s lives. This presents both a strength in the research and a lack of depth – or the ability to home in on one particular theme such as status, decision-making or reputation.

Many previous studies of community and digital technologies have focused on how the technology shapes social networks/capitals, how networks/capitals shape community technology or some combination of these two processes. For a community to gradually move into the information society and connect with the digital economy appears to require an understanding of both context and processes present, both historically and in the present. A snapshot understanding of the flow and flux of relational capital, how weak and strong ties contribute to capital accumulation and the media effects process holds promise.

**Recruiting Participants and Developing Trust with Participants**

**Computer learners**

In order to gain contact with the learners, I began talking to managers at job centres in Darnell, Treeton, and Manor Park. Originally, I was hoping to recruit people looking for work from these centres. A representative from Manor Park Development Trust discussed job seekers and their difficulties using the Internet at great length, but gaining access to this job seekers proved challenging. Many understandably cited privacy concerns or issues with finding time to talk to me. Manor Park’s representative also pointed me to the Heeley Development Trust (HDT), which specializes in upskilling local people to engage with the digital economy, many of whom live in social housing. Gaining access to learners proved to be difficult as I began conducting research because social housing residents not easily trust the possible judgemental eye of outsiders. The Oxford Internet Institute also noted a similar trust issue came up when it recruited ten participants for their research (Reisdorf 2012). Fortunately, HDT allowed me access to their learners over a three-month period. I was fortunate to talk with thirty-seven learner participants in Sheffield. I used a semi-structured interview guide with open-ended questions. Some of my interviews were recorded on behalf of a separate project conducted by Heeley Development Trust to quantify the social impact of their program for additional funding. The Heeley Development Trust’s mission: ‘Making Heeley a better place to be. We want Heeley to be a successful, vibrant and inclusive community; a good place to live, to work, to do business and to visit.’ Eventually HDT became my research partner and aided the data gathering substantially.

To identify a set of interviewees who would represent the social housing residents of Heeley and surrounding areas, again a number of approaches were considered and attempted before setting in this final route using the HDT learner community to provide the candidates for interviews. After identifying Heeley as being a potential community which would represent this group within Sheffield, I approached the primary schools within this area to request permission to have leaflets given to parents of children at the school. This permission was sought and granted from the head teacher at Ann Groves school. The leaflet included contact details for me, both in social media and by email, and a telephone number and a brief description of the project aims. This leaflet was delivered to approximately 300 families as a result. The response to the leaflet was unfortunately disappointing, as it resulted in only a single interview with a social housing resident from Heeley. Moving on from this route, I continued forging links with the staff at Heeley Development Trust.

After I identified the community of Heeley as the preferred base for data collection, I asked Heeley Development Trust (HDT) if I could interview some of their computer learners about their digital literacy journey, social media usage and community. HDT relied on several grants to provide a set of curricula developed by the Good Things Foundation called ‘Learn My Way’ to the community in Heeley and Meersbrook. The Good Things Foundation is a social enterprise concerned with digital inclusion in the UK. The LearnMyWay course covers how to use various aspects of the Internet, such as online banking, shopping, using social media, public services, safety, managing health, managing money, using a computer or device and even finding a job[[1]](#footnote-1). Shortly after establishing contact with HDT, I attended numerous classes along with their education unit throughout the city. HDT had recently won a grant through Sheffield Housing to educate Sheffield social housing residents on how to use their online public services. Sheffield Housing sought to streamline their activities from a central portal to become more efficient in light of government cuts to their services. HDT used a mobile unit to establish mini-classrooms across the city. I attended over twenty-five classes as they used a mobile unit to reach geographically disparate areas, including: Heeley, Darnall, St Mary’s Gate/City, Lower Wincobank, Castledene, Langsett & Walkley, Crosspool, Pitsmoor/Burngreave, Norwood, Westminster, Shiregreen between January and April 2013. With the exception of Crosspool and Heeley, all of the computer classes were located on social housing estates in a local community centre. Heeley Development Trust had its finger on the pulse of Sheffield’s fledgling digital sphere. It serves as the headquarters for numerous digital learning communities networked and knitted together throughout the city. Its programmes gently coaxed learners into becoming embedded in networks based on their own interests. Universal participation online is important because those who are digitally excluded face a growing number of problems, such as struggling to receive Universal Credit or other benefits, use of medical services (making appointments and requesting prescriptions), find new housing (if living in social housing), find and keep a job or feel part of the wider society more generally.

During this data collection period, I volunteered at Heeley Development Trust by gathering evidence of impact in order to secure additional funding for their activities. I also provided them with benchmarked evidence that their education activities were having a positive effect on the local community and other locations that utilized their services. This included videotaping testimonials amongst learners from across the city. I also regularly attended their classes and helped the learning champions with their community outreach. Learning champions are volunteers who assist in providing support for the digital literacy projects through HDT. I freely discussed my research intentions with the learners and asked for volunteers to be interviewed after their classes. Working through the Development Trust provided me with a lot of credibility as a researcher and a way to really embed myself into their activities and the people that they served on a daily basis.

**Knowledge Workers**

Knowledge workers comprise the second cohort in this thesis. This group works within a fledgling digital and creative cluster (Digital Sheffield and the Workstation). They represent the pinnacle of the knowledge economy, many of whom are tech employees. Approximately 12% of Sheffield’s workforce consist of occupations in the creative, digital and media industries (Creative Sheffield discussion, 2012). Additionally, their social media skills are highly developed, and they constitute some of the most prolific knowledge sharers in the Sheffield digital economy. I sought to recruit participants from Sheffield’s digital campus, the Electric Works, which consists of 600,000 square feet of office space. Thus far, 50,000 square feet of Phase 1 has been completed since August 2008. At the time of the fieldwork, it boasted guaranteed download capabilities of 15 Megabits per second (Mbps) for £995/month and surpassed the previous speed record achieved in Oxford at 0.5 Mbps in 2009. This speed is roughly the speed that cable television provides in the home environment (Digital Region, 2011)[[2]](#footnote-2). In the late 2000s, Sheffield made a push with the Electric Works campus and the Digital Region project to have world-class broadband. The webpage initially built to showcase the project advertised that this development is ‘aimed at providing creative, digital and technology-led companies with state-of-the-art business accommodation in an unbeatable location, Digital Sheffield Campus is at the heart of Sheffield’s new future.’ (Sheffield Digital Campus, 2011)

Both projects’ reputation and image were built around the idea of speed. The question of how fast ideas, knowledge, content, and so on, could be shared from point A to multiple destinations (any global location capable of downloads) became the driving force of the initiative. Knowledge workers formed the original baseline for this study because they presented a distinctive profile: the best social media skill set amongst Sheffield’s residents, strong professional networks and superior access to technology equipment and platforms both at home and work.

The site design for the Electric Works boasted all of the features a creative professional could ask for: secure power supplies, flexible floorplans and superior telecommunications equipment. This setting was deemed crucial to the research because I assumed that the broadband network capabilities fostered high levels of digital literacy. The illustration below provides the site plan for all three phases on the development. The Electric Works is one of three buildings developed in Phase 1, as indicated below. It is located on the corner of Sheaf Street and Hammer Lane.



Figure 4: Sheffield Electric Works - a bird’s eye view of Sheffield City Centre showing the Electric Station sites as Phase 1 and 2.(<http://www.sheffielddigitalcampus.comdigitalcampussheffield.co.uk/> 2011)

At the time of the data collection (2013-2014), two buildings from Phase 1 were in use. The Electric Works was the first to open in early 2009. The site originally hosted several different e-learning companies, including LINE, Kineo, DESQ and Learning Light. £1.6 million is being invested in the project currently to turn it into an eCampus with a total investment of £110 million. Incidentally, its location adjacent to the Sheffield Hallam University campus also forms part of the overall “digital campus” strategy, linking the commercial and public infrastructure. Several grants and projects are assisting its development, including Regional Selective Assistance, Regional Enterprise grant and Digital Region (Wikipedia, 2011). The entire development will eventually cover 600,000 square feet over three phases—the last two buildings (Acero and Vidrio: <http://digitalcampussheffield.co.uk/> 2017) at the Phase 1 site are being built at the time of this writing (2017).

**At the Workstation: Getting to know the Knowledge Workers**

I undertook a specific process to identify and negotiate the ability to interview individuals for the knowledge worker group within potential organisations provides a counterpoint to the actual results found from the interviews. I intended to gain a cross section of interviewees in various roles, who worked in Sheffield in the identified creative cluster, and who were physically located in one of the buildings identified as part of the Digital Campus.

In order to achieve this goal, I ended up undertaking a variety of approaches which yielded varying results. My search for interviewees began through primarily online approaches, searching for those who were clearly already active on social media and were also met the locational and “knowledge worker” criteria that I had defined for this cohort. After identifying these individuals, I would attempt to message them directly through the social media site such as Twitter where I had encountered them, and introduce myself, my project and what I was hoping to achieve. I created a dedicated Twitter profile (@DigitalCityPlan) which I used for this contact purpose. This approach yielded a number of individuals who agreed to be interviewed for the project (a total of twelve participants who are professionals), while some others who were contacted initially voiced interest in the project, but eventually did not go through with the interview. The individuals who did agree to be interviewed also often suggested others that they knew, both offline and online, who might also be interested, and it was through this combination of approaches that I acquired more than half of my knowledge worker interviewees.

In parallel with this online search, I rented a workspace at the Sheffield Workstation. During the period from January through April 2014, I had a rent-a-desk office base located within the Cultural Industries Quarter. The office space supports creative and digital technology industries by providing affordable office space, rent-a-desk or virtual office services. It features communal and outside spaces and is adjacent to the Showroom Cinema—a hub which anchors the city’s independent film industry. The office space environment prides itself on its flexible lettings, location, high speed broadband connectivity and networking activities. Embedding myself in the local creative industry milieu helped me to network and establish some research legitimacy amongst local professionals and organizations, which facilitated networking. Prior to moving in, the facility manager touted the diversity of industries in the space and believed that their close proximity allowed them to circulate work amongst each other. It also served as a northern hub for BBC film services, which helped anchor the digital film and photography industries based at this location. The Workstation also boasted 24-hour office access, special events such as festivals, and networking events. It purposely cultivates a youthful image, but also one grounded in the identity of Sheffield as being relaxed, friendly, cutting edge and welcoming. My rent was 200 pounds a month and I was told that I would be sharing an office space with a locally based sports journalist. This never happened; my office wing was relatively isolated from the long-term and more established tenants. There also appeared to be approximately a 25% vacancy rate. Numerous professionals from the business sector based themselves at this location, including architects, graphic designers, digital media specialists, festival organizers, marketing and PR companies, translators, educators, publishing firms, photographers, theatre companies and TV and radio providers. It tried to legitimize the ‘starving artist’ group by providing them with an incubator in which to grow their small businesses.

This enabled me to have a dedicated office space for interviews, and also was intended to provide a way for me to network based on connecting with others employed within the same cluster based on physical location. This approach actually yielded the least successful outcome in terms of direct identification and recruiting of interviewees. In an attempt to raise awareness of my project, I put up posters displaying the project information and my contact details in shared areas within the building. While the Workstation’s literature speaks of the ability to network based on shared spaces (coffee facilities, planned mixer/networking events in the building etc.), it proved difficult to actually make sufficient connection based on either those brief moments of discussion that arise over coffee or during the communal mixer events. Converting the first spark of interest in this research into a commitment which required time away from normal work or home activities that this entailed proved difficult. In total, I gained two interviewees through this route, although the physical location did allow me a space to conduct interviews with people based in the cluster.

The third approach that I used for recruiting knowledge workers within the cluster was to write to HR departments and senior managers within the identified companies. This approach mirrored the strategy that yielded the most interviews in the elite cohort (i.e. C-Suite level employee). In fact, people would often suggest other members of their staff who could also be interviewed, which made it one of the most efficient recruitment techniques. Again, this further indicated that utilising the network of an already interested or engaged party was more reliable than attempting individual connections. An unavoidable bias was introduced into the final interview grouping, as all of those who agreed to be interviewed actually made a conscious decision to agree to it, and in the process, agreed to be included within the loosely defined network of interviewees. This bias presents itself because the participants then became self-selected, so they may be positively predisposed to social media usage. Also, it is unlikely among the professionals and elites that I would encounter participants who were not social media literate in my efforts to recruit as those individuals may be more likely to politely turn down my interview request.

In conclusion, I found that the most effective way to gather new interviewees was through the networks of those who had already agreed to be interviewed. Pure physical location-based approaches or attempts at contact through institutional routes such as HR departments within organisations typically produced less beneficial results.

**Elites**

I widened the geographic boundaries of the elites group when I perceived that it would be difficult for a PhD researcher to access the group. I wrote to all of the MPs in Northern England to tell them of my research and ask for an interview. While many declined the invitation, others never responded. Fortunately, several intermediaries, on the behalf of the MPs set up times for me to interview them.

This group also presented itself as having less reliance on a specific location for the media activities related to their work. I sought participants that had an online presence (such as Twitter) which engages with the public on a regular basis. This enables exploration the relationship of their professional position, digital literacy, forms of media engagement including what types of information they share with others.

I interviewed seven elites from Northern England. This group does not form any noticeable portion of the labour market and their sphere of influence rests within the geographic boundaries of the UK (and, sometimes, within other countries). This group works within specific office spaces—sometimes in two or three locations—and regularly communicates with a broad audience. This communication sometimes occurs through a designated, anonymous intermediary. Depending on the elite, communications happen directly from the source.

The elites are self-aware of their societal position and openly acknowledges their leadership role. All of the participants worked hard to push the boundaries of traditional communicative methods at one point in their careers in order to generate an impact. While Bourdieu (1998) argued that the transmission of cultural capital via communicative methods is no doubt the best hidden form of hereditary transmission of capital, the elites’ use of social media tools purposely forges visible relationships. The strategic nature of these tools will be discussed in the analysis section.

**The relationship between cohorts and spectra**

This chapter set out a series of questions that can be used to structure the analysis. This analysis follows the path from social media interactivity whereby social capital is accrued via visibility and voice to a recognized presence. Linking the research questions with the empirical evidence such as the interactivity spectra shows that neither voice nor visibility can be privileged in the pursuit of recognition. Further, the spectra illustrate the skills which are key to forming voice and visibility in the digital economy for each group.

The ability to influence the perceptions of others figures strongly in each group’s generalized ability to have its narrative recognized by larger society. While social media makes that story immediate, the number of people who interact with it actually gives it credibility. While interactivity is crucial to the embodiment of presence on social media, social networks represent another driving force behind the proliferation of a message. The number of people who respond to content depends entirely on the transactional relationships between members of the network. The formula for voice, visibility, presence, and the key to societal recognition relies on the network’s ability to spread a message. While not a feature of bonding or bridging social capital, the existence of strong, homophilic ties feature prominently into the spreadability of an idea or story.

**Conclusions**

This chapter consisted of three parts. The first part highlighted how and why interactivity forms the conceptual framework for this research. Interactivity is presented in two distinct ways. First, the Interactivity Framework is introduced which shows the distillation process of social media interactivity through to social capital creation, the generation of voice and visibility and then to presence. The ability to establish a social media presence represents the culmination of empowerment and online participation.

Part two featured the research aim, steps and questions pertinent to this research. This is followed by Part three which delved into how an Interactivity Spectra would be used as a basis for analysis. As discussed in the previous chapter, the User-Interaction Spectra is introduced as a tool to evaluate social media usage for each cohort. The five categories are delineated for analysis including: platforms and data linkages, pervasive awareness, networking strategies, representation and sociability. I then outlined the ways in which the spectra were developed, what it measures on a collective scale. The section then segues into a discussion about social structure and tie analysis. The significance of social ties, how they link to social capital, and how this matters in terms of economic mobility to the cohorts in Sheffield. In addition, each cohort is introduced in terms of where they work and live, how they engage with social media and how this all fits into the geography of Sheffield.

CHAPTER 4: DESIGNING AND UNDERTAKING THE FIELDWORK

Introduction

This Chapter is divided into two parts. Part One outlines the population groups observed and the data collection methods undertaken in this research. First, I provide details on the number of participants involved in the research, how they were selected and how I engaged with each cohort. I also discuss social media usage in the UK more broadly based on national statistical data and which networks are featured in the research.

Part two, on the other hand, delves more deeply into the background governing the broadband infrastructure development in Sheffield. This dovetails into a discussion about the knowledge professionals and their perspective of how their workspace environment serves as a necessary component for them to thrive in the digital economy. Lastly, the computer learners are highlighted through their experience of the Heeley Development Trust and its mobile learning environment. Both groups benefit from an investment in infrastructure: either broadband or a mobile classes which symbolizes their struggle and status in the modern digital economy.

Part One: Sheffield as the Case Study

Sheffield, England served as the location for the singular case study. Three groups were selected from among the City’s population: computer learners, knowledge workers and elites. The number of people from each group who participated was variable. The computer learners made up the largest grouping of thirsty-seven participants. They were more dispersed, but also geographically isolated around the City. I also wanted to understand the scale of Heeley Development Trust’s reach around the City via their mobile, computer learner educational unit. The semi-structured interviews were conducted with computer learners living in social housing, where computer classes were offered, in partnership with the Heeley Development Trust.

The knowledge workers included twelve creative professionals based in either the Workstation or Electric Works. The elites, the most difficult to establish contact with, consisted of three MPs, one multi-national business leader, one senior civil servant, and two Chief Executives. For a complete list of the research participants, turn to page 323 in the Appendix where you will find descriptive information.

The number of elite participants remains the smallest, but it represents a group where gaining trust, establishing rapport during the interview and building credibility as a legitimate PhD student were important prior to their agreement. The knowledge workers, by contrast, were the easiest to access at the Workstation because most were either Sheffield Hallam or University of Sheffield graduates which predisposed them to trust a student researcher. This approach was selected in order to compare and contrast each cohort’s social media interactivity. Furthermore, this method addresses the Research Questions and follows from the analytical framework outlined in the previous chapter.

**Through the Eyes of computer Learners, professionals and elites**

This chapter sets out the fieldwork approach that I adopted to collect the data in order to answer the research aims and objects. My approach to data collection fits into the conceptual framework and spectra outlined in the previous chapter, which describes how social media interactivity encourages the creation of social capital creation and how place plays an important role in shaping media dynamics.

I will turn now to a discussion of the locations from which I will draw participants. The case studies will vary greatly in terms of spatial, economic, social and demographic dimensions. They thus provide different contexts in which to investigate issues of media networks, literacy and knowledge flows. It will centre on the city of Sheffield which offers a range of regional economic opportunities with additional employment centres. It is part of a wider Yorkshire and East Midlands industrial conurbation area and is within reach of a longer commute, such as Nottingham and Leeds.

**Qualitative and quantitative data collection methods:**

I used the following qualitative methods to gather evidence towards the singular case study approach:

1. **Semi-structured interviews** with participants who belong to the elite, knowledge worker and unemployed/underemployed categories to determine knowledge-sharing behaviour
2. **Observations** of participants’ online social networks
3. **Documentary analysis** of press clippings and policy documents for Digital Sheffield and the selected underserved/deprived community
4. **Embedding** within the Workstation knowledge worker cluster along with the Heeley Development Trust’s mobile learning unit
5. **Archived** over 1,000,000 tweets using #Sheffield over a weeklong period using Tweet Archivist

**Details pertaining to each collection of data**

While I was embedded in both the Workstation and Heeley Development Trust, I was able to identify potential candidates for interviews. The selection of interviewees was based on the snowballing method, starting with a limited number of scoping interviews with key people from Sheffield Job Centre, Sheffield City Council and Creative Sheffield. During the interviews, it became obvious that pre-determined questions should be set aside in favour of an unstructured conversation. As Sapsford and Jupp (1996: 117) have argued, “the opposition between structured and unstructured methods of data collection is in many ways a false one”. In-depth interviews have been called ‘one of the most powerful’ qualitative research methods because they allow the interviewer to view another person’s experience from multiple points (McCracken, 1988). Interviews also serve to explore areas of “cultural consensus, and people’s more personal, private and special understandings” (Arksey and Know, 1999: 4). Interviews with computer learners were conducted within the designated learning spaces in a private room. Interviews at the Workstation and Electric Works locations were primarily conducted within the offices of the interviewees.

A coding system was developed to identify the spectrum of social media behaviour amongst interviewees. This was further compared to the developed categories. It also took into consideration the professional websites and Twitter accounts of knowledge professionals and elites. I also employed Tweet Archivist, a software program, to archive tweets over a 3-week period pertaining to the city of #Sheffield and #bedroomtax. The data accumulated consisted of over 1,000,000 tweets about Sheffield and the social media #bedroomtax protests.

In total, 37 learners were interviewed in Sheffield, many of whom lived in social housing throughout the city. All quotations from the interviewees are anonymised, or given pseudonyms, in order to keep them confidential. I conducted twelve interviews with knowledge professionals who were based in Sheffield’s Electric Works or the Workstation spaces. Finally, I interviewed seven elites who were primarily based in Northern England representing the government or corporate sectors. Many of the elites maintain a global sphere of influence based on their positions in society.

The core interactivity themes explored in these interviews are set out in Chapters 6 through 8**,** as well as how the themes were divided between the empirical chapters. In short, the balance between attitudes and computer behaviours, barriers and attitudes were explored, along with social connections and networks, and with general civic engagement was explored during the interviews. I asked interviewees about their Internet usage, family/friend/work networks, attitudes toward the provision of digital training and infrastructure, current economic activities and the content of their information-sharing activities through social media. I interviewed knowledge workers in the designated Digital District to understand their experience of working within an environment with superior broadband infrastructure. This included people working at all levels of an organization in addition to the management. The management would offer a different experience of the environment and could explain why they choose the Digital Sheffield site for business purposes. It is unclear whether it was the enhanced infrastructure, the location or a combination of both that attracted the companies in the first place.

Pinpointing what constitutes knowledge-sharing behaviour appears to be the most challenging aspect of this project. There is a wealth of literature about ways that knowledge is shared between different firms located in clusters, or those that have a contractual relationship. Again, knowledge sharing comprises a wide range of information. However, it will be important to establish what this consists of in order to determine the quality of knowledge sharing. On a broad level, knowledge sharing may consist of highlighting a local news story to a network of social connections. It consists of information that explains know-how, as well as know-where and know-why. Organizational knowledge is frequently coded using this language. For instance, if I share a cake recipe with my network of friends, it comprises know-how, know-what and know-why sets of information. The recipe explains how to bake the cake and the ingredients explain what is needed and how long it should bake. Knowledge sharing is a process of organizational structures and technology that enable it to happen. In order to establish what constitutes quality knowledge sharing, we have to analyse the behaviour of the elites and knowledge workers to establish a benchmark of quality. The scoping interviews, for example, identified that monitoring other people’s social network behaviour and reporting it back to colleagues constitutes one form of quality knowledge sharing. It consists of know-what, know-who and know-where information. This allows, for instance, individuals to understand with whom, when and why their contacts are networking with competitors.

I focused the content of my interviews around the development of social and economic capitals and the three principles that govern their accumulation amongst users of the Workstation and Electric Works broadband infrastructure and social housing residents: who do they know who use social media, trust and like (and maybe one-sided aspirational connections?). Connections required two of the three main principles. I compared and contrasted these original principles with digital literacy and social media skills during discussions with interviewees. I intended to conduct semi-structured interviews with key officers from the Sheffield City Council. I also conducted semi-structured interviews with people who work within the Electric Works and Workstation to gauge their literacy and uptake of social media. These interviews explored digital literacy, professional identity, social networks and media usage and levels of comfort and social skills associated with community networking activities.

These interviews took a heuristic, collaborative approach with the participant. I was sensitive to the experience of each participant to avoid a hierarchical approach (Olesen, 2000). The interview structure sought to expose “underlying beliefs, strategies and constraints” (Flick, 2006: 262) in the ways that people professionally or personally network. The qualitative data underwent analysis through grounded theory in order to ascertain the social relationships between the participants and their professional networks. The context of the participants’ locations and socio-demographics was also explored as to how this effect their social connections, in light of Jupp, (1996: p117) as cited in Viitanen’s (2011) argument that the ‘opposition between structured and unstructured methods of data collection is in many ways a false one.’

**The Case for Social Media and Communities**

The positive and negative effects of media dis/use and infrastructure in specific Sheffield communities lies at the crux of this research. A case study approach amongst the different socioeconomic groups present within specific neighbourhoods will provide insight into the combined media and community effects. Interviews revealed a culture of networked knowledge sharing which remains unexplored on a wider scale, beyond both clusters and knowledge workers, at this time. As this culture benefits one sector of the workforce, it is worth considering what it means to be excluded from this culture, as might be the case for the unemployed and underemployed. As Flyvberg (2006) argued, one is able to generalize from a single case study because it is an in-depth examination of an example. This singular case study context, of the city of Sheffield, will contribute to a conceptual framework of relational networks, and how they operate both in the community and through media platforms.

The three groups reported using three main social media sites on a daily basis to varying degrees: Facebook, LinkedIn and Twitter. The following section describes information and data that was pulled from the Statista website which hosts statistical information relevant globally (<https://www.statista.com/topics/3236/social-media-usage-in-the-uk/> 25 May 2017). While this data is relevant to the UK on the whole, it cannot be used to describe only Sheffield. It provides a good overview as the importance platforms have to the general population of the UK. The use of social media websites is becoming the norm in the United Kingdom. At the beginning of 2016, the total number of social media users in the UK had reached over [35 million users](https://www.statista.com/statistics/553530/predicted-number-of-social-network-users-in-the-united-kingdom-uk/), with some estimates as high as [38 million users](https://www.statista.com/statistics/507405/uk-active-social-media-and-mobile-social-media-users/). The penetration and adoption rate each translates to between 55 and 59 percent of the population. The frequency of visits to social networks has steadily grown in Great Britain, with [a quarter of social media users](https://www.statista.com/statistics/271919/frequency-of-social-networking-in-the-howuk/) visiting these sites more than 10 times a day. As expected, user age profiles show highest penetration rates amongst the younger cohorts. However, while the penetration rate in the younger age groups has grown, the share of people in age groups over 34 years old who have a social media profile also [continues](https://www.statista.com/statistics/271879/social-network-profile-creation-in-the-uk-by-age/) to grow on an annual basis. Women in the UK are more likely to have a social media profile than men; 11% more women have one.

The Statista data also applies to Figure 2, page 74 with the Social media skill curve in reference to the population of Sheffield. The penetration and adoption rates hover around 57% of the UK population and this corresponds to the media social media user having adopted broadband and using it meaningfully. In time, the population median move will more toward the third level of the divide by demonstrating social media connections and engagement. Again, at least a quarter use social networking sites at least 10 times a day, which corresponds with the third level shown in the skill curve.

In contrast, men were more likely to be Twitter users. The user age reflected the overall prominence of the younger generation when it comes to social media usage. However, Twitter’s user base is younger than [Facebook](https://www.statista.com/statistics/278287/age-distribution-of-facebook-users-in-great-britain/)’s. Despite the prominence of big social networks like these, [19 to 90 percent of social shares](https://www.statista.com/statistics/529563/share-of-social-shares-by-online-channel-in-the-uk-by-content-category/) in the UK, depending on the topic, happened via other channels like emails, chat and forum posts. Throughout recent years, Facebook has consistently held a steady dominance over the social network market. As the Statista infographic (2017) shows on the next page, the [age group](https://www.statista.com/statistics/507417/number-of-facebook-users-in-the-united-kingdom-uk-by-age-and-gender/) with the highest number of Facebook users in the United Kingdom is 20 to 29 year olds. This age group is also more balanced in its gender usage profile, with approximately 5.3 million female and 5.4 million male Facebook users. Statista forecasts Facebook users to climb to about 41.37 million users by 2021. These numbers reflect Facebook's dominant position on the [UK social media market](https://www.statista.com/topics/3236/social-media-usage-in-the-uk/), where the company reached a [market share of 87.08 percent](https://www.statista.com/statistics/280301/market-share-held-by-facebook-in-the-united-kingdom-uk/) in January 2017. Notably, only 21 percent of UK adults who go online do not use Facebook at all. The user graph on the following page, taken from Statista, shows the recent market shares and usage of social networks in the UK.

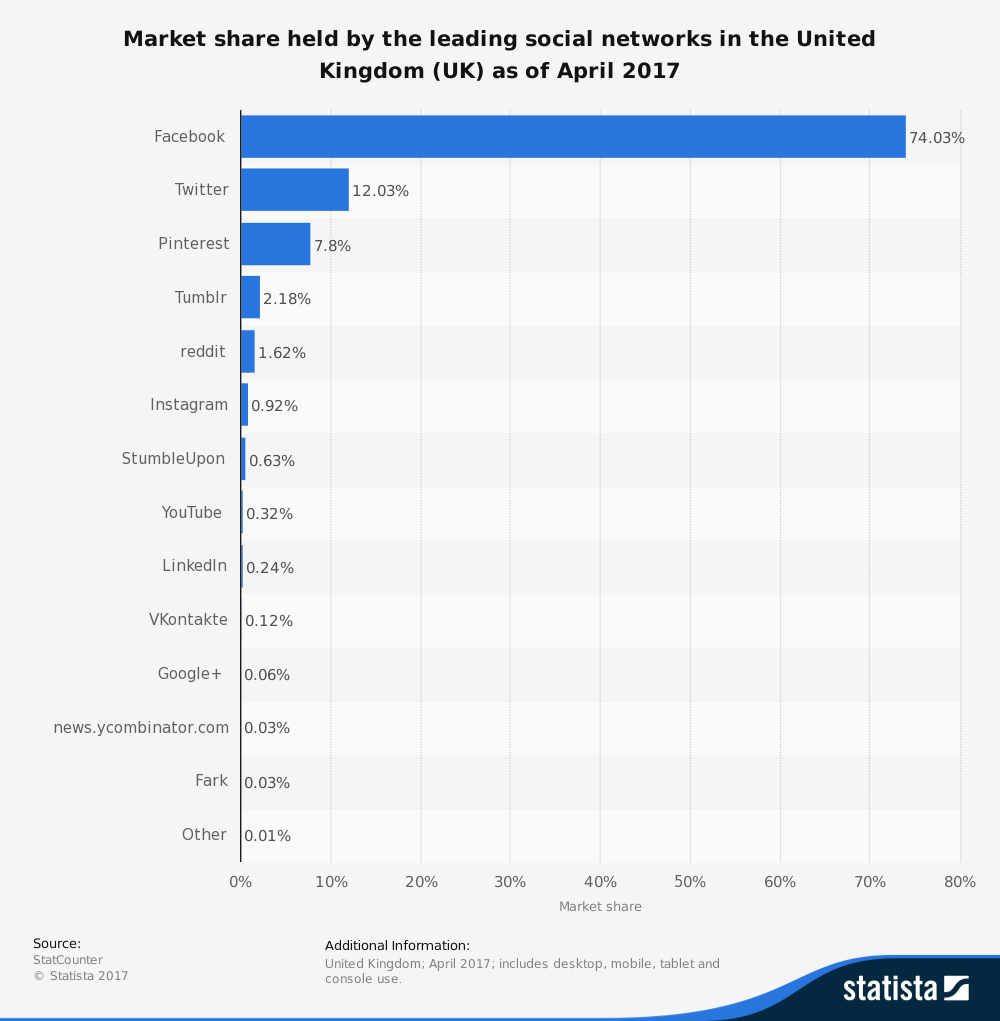
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Figure 5: Social Network Usagedepicts the usage of social networks in the UK.

Part Two: The selected Sheffield communities: Fieldwork engagement

**Sheffield City Background**

I initially targeted the e-learning community because there were approximately 1,000 employees in Sheffield working within e-learning and service businesses. The employees in this business would fulfil the desired criteria of being “knowledge workers” or otherwise employees in businesses which are part of the technology sector in Sheffield. Digital Sheffield campus lies right at the heart of the ‘Digital Mile’ and the city served as a testbed for the Digital Region network. The Digital Region project aimed to provide ultra-fast broadband connectivity to 600,000 homes and businesses. The global economy experienced a retraction, however, which halted the further development of Phase 1 and the e-learning industries suffered a severe contraction. The Digital Region project continued until August 2014, when it closed because it failed to attract a large enough subscriber base to cover its costs. The project initially projected that it would cover 98% of the city by 2012. In reality, it only had 3,000 customers by 2013. However, the data collection for this research occurred in tandem with the building of the Digital Region network. The Digital Region Network cost £150 million[[3]](#footnote-3). This project was a key infrastructure enabler which was intended to provide capability to the technology and digital design businesses which employed the knowledge workers I spoke with. While this research focuses on social media usage, local investment in broadband infrastructure improvements to enhance Sheffield’s connectivity was viewed as an issue of importance to the knowledge professionals and the business environment. The City of Sheffield’s policymakers also believed that developing broadband infrastructure for all had the potential to create a digital inclusive environment for everyone. This is explained with greater clarity on page 131 in a discussion on mobile networks.

This profile gives an overall impression of Sheffield’s creative and knowledge professionals. This group represents the technical middle class and the new affluent worker categorisations. It demonstrates a large concentration of employment in Sheffield in the city centre near Sheffield Hallam University at the Electric Works and Workstation co-working spaces. There is also a concentration of professionals near the University of Sheffield—who work separate from the University. The digital gaming industry cluster also represents a large portion of this group; they are located in the Brightside area of the city. This group has benefitted from the council-led projects generative diverse creative and knowledge clusters in the city. At the Electric Works, members have access to the joint social spaces that seek to encourage a strong, collaborative atmosphere between digital and other innovative sectors. The Workstation, on the other hand, targets creative professionals, such as web designers, graphic artists, ancillary film services and language translators.

The knowledge professionals represent a strong mix of community capitals, but is strongest in emerging cultural capital as identified by Prieur and Savage (2013). This group strives to adapt to the new technological and societal landscape. One interviewee sarcastically noted that this socio-economic group is founded on the notion of meritocracy, with the implication that actually this “merit” was based on networking abilities and not job-based capabilities. These ‘new’ professions tend towards networking in employment and career-based structures and tend to self-cluster both in terms of their working and social lives.

The knowledge professionals’ interactivity profile begins with the development of Creative Sheffield in about 2006. It was initially funded by the Yorkshire Forward Redevelopment Agency to “grow creative and digital industries” into a thriving cluster. It supports digitally focused industries as Sheffield and prides itself on an innovative and outdoor-oriented city. In 2013, one of the interviewees stated that Sheffield “had a critical mass of digital businesses, but there is an ebb and flow in this area, and at the moment, it’s on the decline (mainly due to the global recession).” The City at that time was pushing for a ‘cloud-based’ city with businesses offering cloud-centred technologies to the global marketplace. One interviewee stated that the Cloud City concept was being pushed by a special interest group within the business leadership strata. However, he stressed that a lot of Sheffield’s business community wasn’t buying into it: “there is a real mismatch between the overall strategy and that which is wanted.” He gave some history of the current situation. In 2007, a 15-year Masterplan was released which assumed the continuation of certain funding streams to support Sheffield’s digital industry. In addition, he stated that “the new economic development plan does not take into the fact there is no money and they don’t describe exactly how support will be provided when there is no money.” This interview confirms that the economic and systems architecture of the city were being melded together into a cohesive, strategy dependent on human capital, broadband infrastructure, data and platforms. Some objections remain in the pursuit of a technologically-friendly built environment. This ‘knowledge worker’ explained his objections to the data approach: “cloud is money intensive and will not produce many jobs - maybe 150 jobs. The money from the data centre goes out of time. It will employ people to build the centre, but that will be it, and all the money that is needed for it will just flow out.”

I turn now to a discussion of the differences between urban broadband and mobile infrastructure and why this distinction is important particularly for knowledge professionals. Currently the provision of air versus broadband provision presents an interesting dichotomy in UK telecommunications. The mobile industries rely completely on technological interchange via the air. It is entirely commercial. Operators currently pay the UK government to obtain licenses for ‘air’ rights that solely power the Internet, messaging, phone, apps and other mobile-based technologies. On the other hand, broadband infrastructure rests underground. This infrastructure is subsidized (in 2013/2014) by taxpayers in order to be rolled out and developed. Land-based broadband technologies currently provide a similar service to use by mobile operators via the ‘air’. Importantly, it should be noted that broadband fibre provides users with more bandwidth which allows users to ‘create content’. Content creation is reliant on land-based broadband systems due to its facilitation of high-bandwidth download capabilities. Land-based development of broadband infrastructure is the most expensive of the two: land or air. Fixed, landline service (such as ISPs: Sheffield’s PlusNet, Origin and others) must make the case for subsidies to provide a similar level of service routed in the ground. Indeed, these companies bid for the land rights to provide service through government owned utilities. As of now, the air is completely commercialised whereas the ground is publicly owned simply because it requires large scale development. Air infrastructure is entirely bespoke for the mobile network provider and land-based broadband remains more utilitarian and general. Importantly, the broadband and cellular industries believe universal provision of service will only occur once the technological capabilities allow superior bandwidth to be air-based.

The costs associated with broadband development inhibit its fast growth and it only makes financial sense in places where use is saturated by other professionals. Broadband installation in the ground going from the trenches to a house is expensive and not competitively priced. As customers frequently use a specific subscriber for a finite period of time and then cancels the subscription to find a better deal, it financially hurts the provider because it is not able to recoup costs. One participant expressed his hopes that Sheffield and the UK can get more infrastructure in place in order to change the culture from one that merely consumes information to one that “adopts a content-creating type approach to media.”

## Sheffield City: The learner’s perspective

Sheffield’s economy is in transition. Formerly a world leader in the steel industry, it has sought to reinvent itself over the past three decades. Sheffield’s dependency on steel meant that the jobs there had been mostly traditional occupations. An entire cluster of economic activities reliant on traditional labour, such as specialised engineering shops, logistics and manufacturing enterprises, still have not recovered as much as was hoped from the collapse in the 1980s. One community leader (Arbourthorne) explained the local economy in the following terms: ‘it’s not just the steelworks and shit. Behind the steelworks, there’s engineering shops and behind engineering, there’s everything else. So, it has a big knock-on effect. That happened in the eighties and nineties and now you are into a second generation of worklessness where no one in the family works. That is quite hard to break’. A pattern of exclusion from the workforce repeats itself, becoming an impenetrable cycle.

Development trusts throughout Sheffield offer help to those who seek support. These agencies are ‘really about supporting people, the people who want some help and support’, a development trust advisor told me. ‘If you get a lot of redundancies, like a steelworks in Sheffield shut down, lots of people would come and say, ‘I want a little driving job’ – because it’s the one transferrable skill they’ve got… ‘so I want to drive a van’. The problem is everyone’s had that idea, and so suddenly there’s a big demand for driving jobs’.

## Computer Learners Profile

This profile gives an overall impression of Sheffield’s community of computer learners, which represented the traditional working class (amongst retirees), the emergent service workers who took classes to improve the marketable digital skills and the precariat who take the classes to increase their social outreach and to buffer against government reforms targeting them.

This research discusses the issues facing a wide cross-section of people and their stories to gain better IT skills and adapt to the changing economic climate of the City. I set out the basic characteristics of this population: who they are and what they hope to achieve during their computer classes. This cohort concerns a section of Sheffield’s population who are worried about being ‘left behind’ by society. Many participants echoed this sentiment. As such, the socio-economic grouping includes the ‘other’ narrative – being part of the less privileged, but striving to be a visible ‘part of modern society’ (Crosspool learner) and change that narrative.

Heeley Development Trust Heeley’s learners include residents from geographically disparate areas of the city, including: Heeley, Darnall, St Mary’s Gate/City, Lower Wincobank, Castledene, Langsett and Walkley, Crosspool, Pitsmoor/Burngreave, Norwood, Westminster, and Shiregreen.

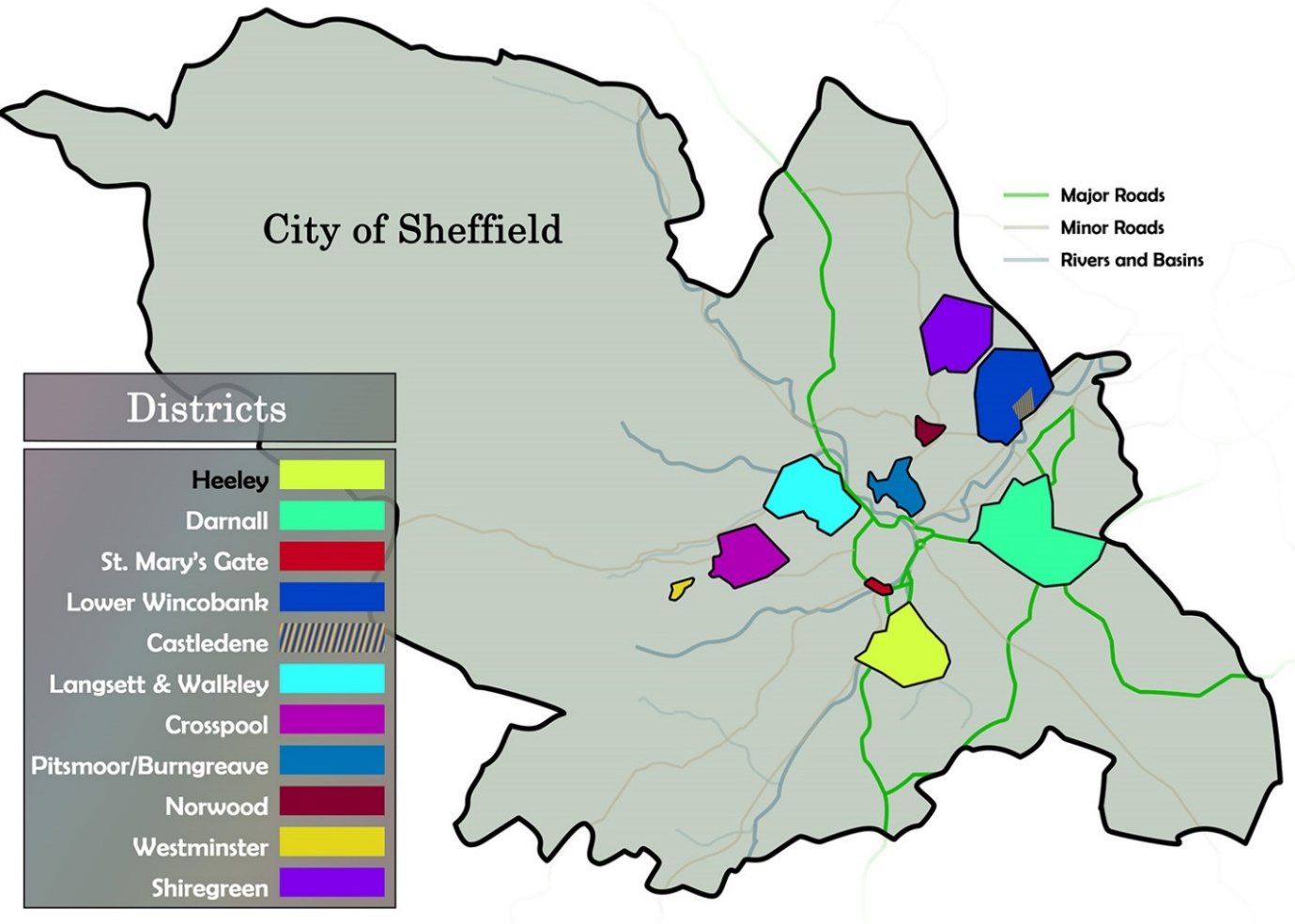


Figure 6: Heeley Development Trust: Map of HDT’s network of computer learner classes in partnership with local TARAs

Interviews with the computer learners took place between January and April 2013. With the exception of Crosspool and Heeley, all of the computer classes were located on social housing estates in a local community centre. Heeley Development Trust has its finger on the pulse of Sheffield’s digital sphere. It serves as the headquarters for numerous digital learning communities networked together throughout the City. Its programmes gently coax learners into becoming embedded in a knowledge network based on their own interests. Universal participation online is important because those who are digitally excluded face a growing number of problems, such as struggling to receive Universal Credit or other benefits, use of medical services (making appointments and requesting prescriptions), find new housing (if living in social housing), finding and keeping a job or feeling part of the wider society more generally. They are willing participants in their education. Some wish to remain digitally excluded and this paper only touches on these issues. This chapter begins to chronicle Sheffield’s demand and a need for a lifelong learning culture. It is challenged, however, by the sheer diversity of the participants. This consisted of learners spread throughout fourteen different neighbourhoods, consisting of eleven community leaders, twenty-five social housing residents, nine job seekers, fifteen retirees and about ten who want to better influence local decision making. Many of the participants held could be categorized as community leaders, who were retired and lived in social housing. The number who participated is fixed at thirty-seven, but could occupy multiple categories.

Life is experienced differently for the computer learners living in Sheffield. This cohort lives either in social housing or in a neighbourhood with a high proportion of residents on a pension relative to Sheffield’s population. Both groups subsist off low incomes. Their urban experience is being transformed, not by the technology itself, but the political and societal push to embrace it. The computer learners were interviewed about their online interactivity with social media. They represent a digitally excluded population group which, at the time of the interviews, was receiving computer classes through the UK Online Centre branch of the Heeley Development Trust.

## Who are the computer learners?

This profile gives an overall impression of Sheffield’s community computer learners which represented the traditional working class (among retirees), the emergent service workers who took classes to improve the marketable digital skills, and the precariat who take the classes to increase their social outreach and to buffer against government reforms targeting them.

The following groups struggle to be included in modern society which exists online. Eleven million people belong to this group in the UK and they have no digital skills. Of these, here is a breakdown of those without digital skills (Good Things Foundation, May 2013):

* Those who have NEVER used a computer – 61%
* Lapsed users – 3%
* Narrow users – 35%
* Disabled – 25%
* No qualifications – 40%
* 65+ – 61%
* Annual income of less than £12.5k – - 42%

The total above does not add up to 100% because those without digital skills often comprise of one or more categories. For example, someone could have both a disability and an annual income of less than £12,500. The characteristics of people digitally excluded includes living within the first level of the digital divide and among the learners. This group been consistently left behind. Therefore, changing long embedded behaviours and habits to close the gap is a challenge the government appears to support. Some of those who opt out of classes, but are excluded often feel that “I don’t need the web.” Further, 82% of the digitally excluded do not have access to the Internet because they ‘have no interest’.

## What are the digitally excluded missing out on? How does it benefit society for everyone to be online?

According to the Good Things Foundation (2013), people with good ICT skills earn between three percent and ten percent more than those without them. ICT skills are also viewed as crucial skills among employers; seventy-two percent would not even interview candidates with no ICT skills. Lifetime earnings and savings are also increased by approximately £8300 among those who go online. Estimates suggested that British people purchased £221 billion worth of goods online in 2016. Public services online (aka e-government’s Digital by Default) are both more efficient and more convenient for people to use than if they take time out of their day and travel to a local centre to be serviced after a wait. Ninety-three percent of people find gov.uk easy to use for their public service provision. It is believed that the government would save £70 billion if people conducted all of their public services online by 2020. The Good Things Foundation has also found that people visit their GP thirty-six percent less after using NHS Choices, the online health website. They also purport that if this percentage increased by one percent, it would save the NHS a further £108 million. The number of people online also greatly affects educational attainment. The Good Things Foundation has found that online learning contributed to £786 million to the economy by increasing overall educational attainment in UK society. Lastly, online connectivity boosts our social life: thirty-three percent of people regularly communicate with friends and family online. The Good Things Foundation has also estimated that Facebook boosted UK business participation by £14 billion in 2011.

The Good Things Foundation has identified three main impediments to digital inclusion among those that are excluded: Motivation, Skills & Confidence, and Sustained Access. I will add and discuss the relationship between these three obstacles further in the thesis. Twenty percent cite a lack of online skills as to why they do not have broadband. Another twenty percent state that cost is a barrier to access at home. Less than 1% consider poor broadband service as a primary reason for their digital exclusion.

Based on my data collection, Sheffield’s digitally excluded population also includes immigrants from non-European nations, carers (those caring for dependent relatives) and men over 40 who work in traditional occupations which have low barriers to entry (such as lorry drivers and cleaners). In terms of socio-economic status, 35% of the DE group only visited less than four websites per week, thus revealing a very narrow usage pattern. Only fourteen percent of this group explored twenty or more sites during the week.

This research discusses the issues facing a wide cross section of people and their stories to gain better IT skills and adapt to the changing economic climate of the City. I set out the basic characteristics of this population: who they are and what they hope to achieve during their computer classes. This cohort concerns a section of Sheffield’s population who are worried about being ‘left behind’ by society. Many participants echoed this sentiment. As such, the socio-economic grouping comprises of the ‘other’ narrative - one of the less privileged, but striving to be a visible ‘part of modern society’ (Crosspool learner) and change that narrative.

Among Sheffield’s social housing residents, unemployment remains very high. At the time of my interviews (April 2013), the unemployment rate among social housing residents was around 20% (Interview with HDT’s Executive Director). One job seeker and social housing resident from Burngreaves noted that job openings have ‘shifted online’ and called the entire experience of job hunting ‘a new world’. Learners who enter this ‘new world’ initially feel daunted and express concern about by the prospect of conducting online job searches and applications. However, the friendly, collegial atmosphere of the classes puts the learners’ fears to rest.

It is also worth noting that the learners that I interviewed clearly relayed a feeling to me of trying to make their way through the woods at night without a flashlight. Navigating the job market and securing a job was a *dispiriting task* both necessary for their survival and self-confidence.

## Heeley Development Trust and Social Housing Residents

It was suspected that the learners experienced a combination of lower digital literacies and poorer access to technologies and broadband. This group of people would thus potentially register a high digital divide profile. The spatial characteristics of Heeley’s digital network shows the connections between residents and community leaders, particular those representing social housing residents throughout the city. In the following section, I outline and discuss the influential factors that helped lead the organization to develop an online community hub. HDT provides the vision and leadership necessary to improve the ICT infrastructure and offers learning services to digitally excluded neighbourhoods in Sheffield. Heeley Development trust serves as a vital bridge to the cultivation of digital skills among many of Sheffield’s digitally excluded. HDT has a full-time physical presence within Heeley, which serves as a hub for its activities and those of local community residents. HDT also builds capacity into the local civic infrastructure by branching out of Heeley. The fact that HDT’s roots are in Heeley, a traditional area of Sheffield with a diverse population, adds to its credibility among learners who take HDT courses in other neighbourhoods. Many learners are the leaders and committee members of the Tenants’ and Residents’ Associations (TARAs). Their digital exclusion remains much more pervasive and is only perceived, in part, because they are so committed to improving their situation.

A typical day for Heeley digital skills teaching staff begins with checking in at the main hub in Heeley around 9 am. A quick discussion with other members of the adult community learning team about the classes offered for the day ensues, followed by loading up a vehicle with the mobile equipment and journeying to the class location to set up the mobile unit in time for a 10 am start. Instructors teach two groups per day and have to zip from Heeley to the first destination, have a thirty-minute break and then go to the next class destination to set up for a 1 pm start. Heeley Development Trust’s mobile IT learning unit is highly trusted amongst the communities (even the recent ones) that it serves.

All of the learners were willing participants in their education. Some wish to remain digitally excluded; this paper only touches on that issue. The interview participants included thirty-six social housing residents (eleven of whom represented community leadership), nine job seekers, fifteen retirees and about ten who want to better influence local decision making. The issues facing a wide cross-section of people living in social housing, their quest to gain stronger IT skills and adapt to the changing economic climate of the City set the tone and baseline for the study. It set out the basic characteristics of this population: who they are and what they hope to achieve during their computer classes. This cohort concerns a section of Sheffield’s population who are worried about being ‘left behind’ by society. Many participants echoed this sentiment. As such, the socio-economic grouping involves the ‘other’ narrative - that of the less privileged, who are nonetheless striving to be a visible ‘part of modern society’ (Crosspool learner) and to change that narrative.

## ‘It's happening in Heeley!’

Heeley is a neighbourhood alive with activity (see https://heeleyonline.org/). At the heart of this Sheffield neighbourhood, the Heeley Development Trust (HDT) was founded in 1996 by local residents as a grassroots organisation seeking to regenerate the local community. Its outreach mission encompasses the communities of Heeley, Meersbrook and Lower Arbourthorne. This area is labelled yellow in Figure 7 on page 135.

HDT serves over 100,000 people living in these primary communities. HDT specifically sets out to address levels of digital inclusion in the community. It wants its residents - and the digitally excluded in Sheffield more broadly - to be able to participate equally and contribute to the digital economy. It is an extremely progressive and forward-thinking development trust with a longstanding reputation in the city.

Andy Jackson is the chief executive. He has a very specific vision of Heeley and where it fits into the Sheffield region. He believes in the residents’ capabilities and is passionate about what can be achieved in Heeley to get people online. This leadership is well supported by Maxine Bowles, who is the Sheffield Capacity Builder Project Manager. She manages a staff of about ten, including instructors and learning champions, and is in charge of the UK Online Centres that operate out of Heeley. This includes the network of digital learning programs throughout the city, such as training provided by Sheffield Homes, operated by Sheffield City Council for their social housing residents. However, the services the HDT offers through its wide array of digital inclusion projects boost that number considerably.

HDT has a wide-reaching presence in Sheffield. It boasts a number of digital media projects, such as the Heeley Voice newsletter, Heeley online blog, Sheffield Media Productions, Sum Studios and Platform Digital Media Centre. It has partnered in the past with the University of Sheffield, the City of Sheffield, the Department of Work and Pensions, Norton College and the Good Things Foundation (formerly UKOnline Centres as of July 2013). James Richardson, HDT’s Volunteer Manager, described the diversity and growth of the Channel Shift public service partnership project in Sheffield: ‘The aim of the project was to establish strong links with public service providers, community organisations and those working with digitally excluded people. It overlaps with and has raised the local profile of Heeley Development Trust and the UK online centres network. The next move involves referrals between organisations and the creation of new local outreach and in-reach sessions based on digital exclusion across Sheffield.’

Although HDT has a small and dedicated staff committed to making the area a great place, the financial sustainability of the organisation is always in jeopardy. Its budget relies heavily on the whims of government. It must compete numerous times per year in order to keep its projects funded and operational. It has had to carve out a very hand-to-mouth existence to ensure its survival, as each project relies on separate funds. At this point, HDT’s digital learning classes depend on funding from two sources: Sheffield Homes and the Good Things Foundation. Both of these agencies, in addition to HDT, have identified Sheffield’s social housing residents as having the largest spatial concentrations of digital deprivation in the city. This is why these residents are being targeted for the computer training HDT offers.

The Department of Work and Pensions and the Department of Communities and Local Government provide the necessary funding for both agencies. Sheffield Homes is concerned with getting its social housing residents online to increase e-government and public service provision, as dictated by the current Channel Shift/Digital by Default policies. In addition, its officials distribute their funding to outside agencies (such as HDT) through a tender process for community ICT classes and to create a central computer hub for each housing estate. It is envisaged that each hub would be based at the community centre for the whole community to use. Unfortunately, the community centre presence is patchy. Neither Shiregreen nor the Burngreave neighbourhoods, for example, have community centres to serve their needs, and there are significant concerns about this, which will be discussed later.

The Good Things Foundation provides the funding for the original UKOnline Centre community hub at HDT’s headquarters. They serve as a managing agent for funding digital learning courses on behalf of the DWP and the DCLG. Historically, this foundation has provided funding for UKOnline Centres. They are also starting, as of August 2013, a project looking into the viability of digital housing hubs. The Good Things Foundation, as its officials have stated, wants social housing tenants to improve their digital skills and benefit from the Internet. As of August 2013, the organization is providing £400,000 to twelve landlord projects which will provide community volunteer support, expert mentors, mobile internet Wi-Fi clouds and recycled ICT equipment.

HDT’s director, Andy Jackson, compares Sheffield with an equivalent mid-sized American city: Portland, Oregon. He based his case on the parallels between the two cities. Portland and Sheffield are both renowned for abundant forested greenspaces, sports legacy, steel heritage and excellent universities, coupled with a strong technology industry and workforce. Heeley Development Trust seeks to build on these strengths in Sheffield, beginning with Heeley. As such, it concentrates its efforts in two primary arenas. It aims to develop the local digital economy and prepare its workforce to meet these challenges. HDT, in keeping with Sheffield’s sporting culture, has also recently capitalised on the development of a series of linked greenspaces running parallel to the A61 featuring a children’s playground, climbing boulders, wildflowers, trails, BMX track and a community event space. It also has a workshop where local youths can refurbish and sell bicycles, learning valuable skills in the process.

During the period of interviews, HDT was in the process of refurbishing the former Anns Grove Primary School (a neighbourhood landmark building) as a creative hub in the community. The project followed a study that identified this need within the community and as another avenue to spur local growth in the digital economy. The former school will convert to highly networked work spaces and offices. This will provide an outlet for local creative businesses that are embedded in the community. It will also include a Digital Media Hub (supported by the Sheffield Community Network) that ‘will encourage new and growing businesses to settle in our community, will harness the creativity and talent that Heeley is awash with…’

In May 2012, HDT partnered with Digital Region and its local ISP, Origin, to deliver superfast broadband to the local area. One of Origin’s employees, who resided in Heeley, prompted the decision to use their service. The local influence was noteworthy enough that it was mentioned on the Digital Region website. The superfast broadband currently operates at the UK Online Centre located at HDT, where its learners, community members and digital media lab users are able to take full advantage of it. The Trust offers a free Internet drop-in centre, plus classes through its UK Online Centre. The computer centre is staffed by tutors and volunteer ‘digital champions’ who assist visitors.

HDT piloted the first online learning programme in Sheffield. Its UKONLINE Centre pioneered a project to close the exclusion gap in the city by introducing these fundamental steps:

* One-to-one support with digital champion volunteers and expert tutors;
* Local marketing – getting local brands involved in the action;
* Outreach – giving people support where they live, work or play;
* Hyperlocal delivery – friendly, informal community spaces are utilised for classes;
* Inspiration – showing that being online and using computers is relevant and fun;
* Online learning (LearnMyWay program used by Heeley Development Trust and developed by the Good Things Foundation) – ‘own pace, any place, bitesized pick ‘n mix’ (Good Things Foundation’s phrase for its e-learning program in 2013);
* Intermediaries – using trusted partners to extend services to hard-to-reach people; and
* Access – Wi-Fi signposting and partnerships with local broadband providers (such as PlusNet, which provided reduced rates for social housing residents in the Sheffield region).

## Outreach targets

All of the agencies serving Sheffield’s less-privileged have service targets that they must reach. Indeed, this target-driven culture dictates the outreach of the ICT programs. Attendance must be high – at least eight per class – in order to continue to receive funding from Sheffield Homes or the Good Things Foundation. Heeley Development Trust currently runs four to five classes per day, in addition to operating numerous classes, along with a drop-in centre, from their Online Centre. Ideally, they educate approximately seventy people per day. Each class is staffed by a primary tutor and at least two digital champion volunteers. While there are waiting lists for current classes, it is very difficult to meet class targets, for a variety of reasons. Learners cited difficulties in getting to classes due to inclement weather. Snow, icy pavements, cold temperatures and unreliable bus services were all flagged as obstacles to attendance.

Digital exclusion, defined as not being able to use or easily access the Internet, affects at least 95,000 people in Sheffield (Good Things Foundation 2014). HDT co-ordinates sessions with Sheffield Homes, the Sheffield City Council Library Service and JobCentres, and delivers instruction in venues ranging from community centres, pubs and sheltered housing schemes. They currently hold weekly classes in 30 venues and emphasise that all of the classes are **‘friendly and free of charge’.** Yet they strive for growth, hoping to provide more classes throughout Sheffield.

## Conclusion

The chapter on field work identified each cohort: their geographic and socio-demographic components. A benchmark was also set by highlighting the UK’s national social media usage. These national statistics offer a perspective on the usage of social media across the country and serves as a standard from which to judge the group’s literacy. The importance of knowledge sharing behaviours and their ability to be present in media networks was also explored, as was the importance of environment: both the city centre and HDT as a gateway to the connectivity necessary for each cohort to persist in their context. Both the learners and knowledge professionals sought to thrive in their environments and were also dependent upon them for opportunities and survival. The elites were not profiled here in terms of their locations and background here as they are much less dependent on the infrastructure features of a specific place-based environment to be successful in the digital economy.

The chapter intended to provide the background information necessary to tell the story of each cohorts’ narrative pertaining to social media interactivity and social ties. It laid out the features of successful media engagement for both computer learners and knowledge professionals as developed by the city of Sheffield’s policies derived to bolster the creative class and also the Good Things Foundation which serves the digitally excluded. It also provided context to social media usage throughout the country, not just Sheffield. Understanding how social media interactivity weaves into the overall fabric of how networks feature prominently among all three groups. This research now turns to the subject of the learners’ interactivity profile and stories.

CHAPTER 5: COMPUTER LEARNERS’ INTERACTIVITY

This Chapter focuses on the way computer learners navigate their lives while pursuing classes via the Heeley Development Trust. I begin with a discussion on recent policy shifts that places conditions on receiving social welfare with the ability to access and use the Internet. As such the computer learners’ quest for survival in the digital economy is well documented in this Chapter. It delves into how the relationship between government and social housing residents are significantly strained because of a lack of bridging social capital and the welfare policy conditions. I outline the experiences of the thirty-seven participants, where they lived and their gender in the following table:

|  |  |  |
| --- | --- | --- |
| **Moniker** | **Gender** | **Location of Work or Residence** |
| **LEARNERS** |  |  |
| HL1 | M | Manor Park |
| HL2 | M | Heeley |
| HL3 | F | Heeley |
| HL4 | F | Heeley |
| HL5 | F | Lower Wincobank |
| HL6 | F | Pitsmoor |
| HL7 | M | Pitsmoor |
| HL8 | F | Heeley |
| HL9 | M | Heeley |
| HL10 | F | Norwood |
| HL11 | F | Heeley |
| HL12 | M | Pitsmoor |
| HL13 | M | Shiregreen |
| HL14 | F | Pitsmoor |
| HL15 | F | Darnall |
| HL16 | F | Langsett/Walkley |
| HL17 | F | Langsett/Walkley |
| HL18 | F | Norwood |
| HL19 | F | Norwood |
| HL20 | M | Crosspool |
| HL21 | F | Norwood |
| HL22 | F | Norwood |
| HL23 | F | Norwood |
| HL24 | M | Pitsmoor |
| HL25 | F | Lower Wincobank |
| HL26 | M | Burngreave |
| HL27 | F | Westminster |
| HL28 | M | St Mary’s Gate |
| HL29 | F | St Mary’s Gate |
| HL30 | F | St Mary’s Gate |
| HL31 | M | Crosspool |
| HL32 | F | Crosspool |
| HL33 | M | Crosspool |
| HL34 | F | Darnall |
| HL35 | M | Shiregreen |
| HL36 | M | Shiregreen |
| HL37 | F | Castledene |

Life is experienced differently for computer learners living in Sheffield. This cohort lives either in social housing or in a neighbourhood with a high proportion of residents (relative to Sheffield’s population) who are on a pension. This cohort predominantly subsists on a low, fixed income. Their urban experience is being transformed, not by the technology itself, but by the political push to embrace ICT as a way to access government in the form of institutional efficiency. Indeed, technology or social media are not tools computer learners seek to grasp in order to achieve recognition of their issues, life or problems. They actively desire recognition, an acknowledgement, from the broader public that certain policies are unfair and negatively impact their lives. However, social media plays no meaningful role in their lives as a tool to express their voice or increase visibility among others. The computer learners were interviewed about their online interactivity with social media. They represent a digitally excluded (DE) population group which, at the time of the interviews, was receiving computer classes through the UK Online Centre branch of the Heeley Development Trust.

The ability to secure and keep a job is a key component of societal success in the digital economy. One interviewee, HL1, whom I mentioned earlier, discussed the extent of the occupational skills, position flexibility and aspiration mismatch. He stated that: ‘more traditional occupations and aspirations appeal to the widest number of job applicants. The lower-paid jobs in Sheffield are the ones that are hardest to get. For instance, lots of people aspire to be a cleaner because the hours are flexible, and it appeals particularly to single parents with childcare issues who need to work at least sixteen hours a week. It also has a lower barrier to entry as it requires few transferable skills’. This sentiment echoes the situation facing HL3, a recent immigrant from Asia living in Heeley. It took her two to three years before she became confident enough in her English to move into the job market. As a result of this transition period, she has been out of the workforce a long time. In her native country, she was a language teacher. Now, she browses for jobs online as a language interpreter, looks for administrative jobs in Sheffield and also looks for better homes. She has noticed that it is harder for people to find jobs at the moment and mentioned that, ‘the competition for work is hard.’ She volunteers at her daughter’s school once a week and is concerned about the pressures she would face in a full-time job: ‘I can’t find full-time work right now because my children are young.’ She is very computer literate, but is trying to make more local contacts within her community. She does not have a local network of support – or even know where would be supportive of her efforts to find work. HL1 stated, ‘You have to know what is out there and who to talk to about it’ (referring to the job situation). This evidence suggests that having the right connections in the wider community (perhaps beyond the neighbourhood) is critical to enable immigrants to the UK to become economically independent and successfully build a life here.

I have spoken of the efforts learners make in order to secure work. I should also state that none of the people that I spoke with have managed to find work, apart from temporary positions in two cases. HL3 registered with job agencies and emailed her CV for various positions. She gets emails with job vacancies she might be interested in; she peruses job listings from home. She uses LinkedIn to look for jobs both here and back in her native country. She gets emails from Reed’s (a recruiting agency) which sends her jobs they think will be a match for her and to which she can then apply online if she chooses. She also receives job notifications through Twitter, but prefers not to use this medium. This level of interactivity and planning indicates a high level of ICT skills and this participant has found temporary work at a university as a translator from time to time. On the other hand, she desires more regular work and is finding it difficult to break through the small university bubble into the wider sphere of jobs in Sheffield. Although working at the university has given her credentials a seal of approval from a reputable local institution, it has failed to open more opportunities for her, perhaps because she lacks a wider network from which to draw. I also think that while engaging in online job searches is useful, she has no personal connection with positions to which she applies. The CV and emails are all sent into a void. For this learner, being seen as a credible, reputable and capable employee remains difficult because she lacks a network to help her gain the recognition necessary to find a permanent job.

Many of the learners spoke, in a roundabout way, of monitoring the economic situation and employment climate for job seekers. The act of monitoring happens naturally in the course of looking at the available jobs on a regular basis. The learners reported getting a sense of what types of jobs are available, where in the city they are located and whether the number of positions has increased or decreased in the recent past. Job mobility emerges as a minor theme. An advisor explained that Aberdeen has a lot of specialised jobs for people who are highly skilled, prepared to travel and would not mind re-locating. Based on this view, job hunters who are highly mobile, flexible and have in-demand, niche skills operate from a more privileged position in the job market.

The learners said they were looking for domestic help positions in addition to jobs as accounting technicians, administrative assistants, labourers and lorry drivers. They aspired to an assortment of traditional jobs. However, these lower-paying positions are the hardest jobs to obtain because there is more competition for them than skilled work. A lot of these jobs offer or encourage their employees to work part-time hours, which allows people to be employed without exceeding a tax credit threshold. It also enables companies to expand their employee base. Competition becomes fierce because there are no skills shortages in Sheffield for these positions. Learners and their advisors share the perception that people who have transferable skills are easier to get into jobs—and maybe ones that are higher-paying.

I had hoped to talk to a learner who had found a job as a result of the online training. However, learners who do find jobs tend to quit taking classes, which makes it harder for HDT to track them and gain feedback. I did, however, interview a learner who had very good ICT skills, but needed to improve them to become an advanced Excel user for her current employer. Her employer (local to Sheffield City Centre) refused to pay for computer classes or allow her the time to participate in them, despite requiring her to upskill in order to remain in the job.

## Surviving the welfare reforms and policy’s emphasis on technology

The norms of engagement with both Central Government and each other were beginning to be rewritten in the lives of the computer learners at the time of the interviews. One of the instructors from HDT noted that when people start the computer classes, they frequently become overwhelmed. What may seem like simple tasks, such as turning on the computer, using a keyboard or mouse and accessing email take several weeks of effort for most. Learning how to navigate these changes requires substantial effort and confidence in equal measure. As the terms of engagement change with policy, computer learners try to relearn new rules. People return to the classes because they fear exclusion from ‘modern society’. Underlying this relationship with modern life, learners face tension among differing notions of home, their role as a citizen and their place in an increasingly globalized, technology-driven nation.

Determination to persevere through the classes was paramount to the learners as they recognized their inability to participate effectively in society without the knowledge they hoped to gain from them. The attitudes of the learners (Vroman et al 2015) showed a mixture of fear and distrust of computer technology for a number of reasons: 1) cost of replacement if damaged (what if they have to live without it at some point after they have been hooked?); 2) lack of technical knowledge of how to protect themselves from scams or viruses; 3) privacy and 4) the need for a service contract for broadband.

In general, many learners fear breaking the computer as they have few financial resources and social capital (with the necessary skills) upon which to turn for help if something goes wrong with the equipment. One learner related how, prior to the computer course, he couldn’t even turn on a computer: ‘I was frightened I would break it’. He also observed that computers are very time consuming: ‘if you don’t use it all the time, you forget it. I know I have to practice every day or I’ll forget it’. Their needs, on the other hand, are great: they want to shop, bank, communicate with family in other parts of the world, Skype and pay bills online. All of these represent steps toward gaining some independence within the modern context. One social housing resident remarked that ‘the computer is so convenient for elderly people in case they get stuck in their house’. For her, this rationale helps reinforce her desire to continue classes because modern life means that the neighbours are less likely to notice if she gets stuck in her home due to illness and weather.

## Jobs, skills and digital infrastructure

Urban labour markets have changed significantly over the past decade, a time when the importance and role of ICT has affected employment across many sectors. This underpins all aspects of the labour market. Yet as employers shift their recruitment methods to online formats such as requiring an email, the ability to job seek online and fill in the requisite application, the social abilities of employees appear less valued than they once were (Green 2017). Digital skills appear to trump the ability to inquire about open positions at a possible employment venue and the human contact required to promote oneself from one person to another using body language, tone and the in-person ability to project a sense of professional friendliness. These ordinary social skills are lost in the realm of seeking employment online until one makes it to an interview.

Several of the learners were unemployed and also looking for a job. HL24, for example, was looking for a job and accepted that it might take him awhile to learn how to use a computer: ‘*I’ll get there*’ sums up his attitude. He is a job seeker and wanted to look for a job online eventually. He noted that there are a lot of job openings online: ‘there’s a lot more jobs online than anywhere else in this new world’. Employers spend a lot of time and effort in advertising their positions online – they want to be recognised as workers with potential by employers. However, as many of them switch from newspaper ads or recruitment agencies to help find employees, the quest for recognition as a good employee becomes less acute. The inability to use a computer already acts as a pre-screen against those who might apply, and they have to work less hard to attract the right talent by moving to a recruitment effort that solely exists online.

HL2, another learner and job seeker, feels “more confident as it (classes) goes on”. However, he does not have a personal computer and relies on his partner’s laptop. The computer course has helped him learn how to text on his mobile phone and he is now starting to learn how to email. He was very proud that he just set up an email address and was learning how to use that over the past week. She helps him out with using the computer as the Jobcentre sends him information online which he cannot access in a timely manner. Independence is important to him, he stated that he “wants to do everything himself”. He said that the local classes “are important because they are free and give us experience, but I need more”. He appeared very motivated to find a job and hoped he would be helped “by learning the right computer skills”. Before coming to the classes, he reported being “very nervous and afraid to use” the skills he did have. He hoped to be able to use his new email address to find a job soon. Green (2017) developed a framework for enabling support factors crucial to employability. In this, she highlights a number of factors which would potentially negatively affect HL2’s efforts, such as his access to computer resources, combined with local employment features (such as a company using ICT to recruit and select candidates).

HL4 was another learner was a single mother with three children who had immigrated to the UK from Yemen and was looking for a job. The supermarket Asda served as a gateway for her learning how to shop and gaining trust in the process. She is currently job hunting and is very interested in taking more computer classes to improve her skills. Because she is looking for a job, she has found that “computer skills are needed when finding and applying for jobs”. HL4 is looking for a job that is near her home and does not require a lot of experience or qualifications. We talked about job hunting and she’s frustrated because everyone asks for UK experience or qualifications. “I am very keen to study and improve myself and need a chance”, she told me. Her preference is to work in home health care as a carer, and she realises that “there are courses available online”. She added that most of the jobs for this field are online and it helps her to use Google to search for “home health care Sheffield” in order to find ads for jobs that are close to the area. On the other hand, she finds the Jobcentre search engine very frustrating because she doesn’t know the specific titles. Applying the employability framework to her indicates a high chance of success because she is very adaptable, is aware of the complexity of the selection process, workplace culture and norms and has access to ICT resources.

One of the TARA (Tenant and Residents Association) leaders explained that younger people and immigrants from Somalia and Yemen need help with online job searches. Some of them brought their children to the courses; the kids played together quietly away from the computers. Interpreters were also available in person to help translate materials and questions for them. One of the women in the computer classes wanted to do care work, but was unsure of what to do and where to go to try and find jobs. She was looking forward to looking online for jobs, and being able to job-hunt that way. And because she is young and has young friends, she can share her newfound knowledge with them and help them learn what they can do and where to look for jobs online. In short, the course gave learners the encouragement not to be afraid to turn the computer on and give it a go. The classes thus encouraged them to go further. They not only provided the necessary infrastructure to enable information sharing on how to use the computer to achieve their goals, but also added to their social networking offline, such as a place to practice English safely. HL5, one of the learners, stated, “when I came to England, I had to learn English and find a job. Learn English first. I can practice here”. The goals of learning how to find a job, practice English and meet others are intertwined. Now that she speaks English to a high enough standard to work, she has been concentrating on finding a job.

Another recent female immigrant, HL26, a job seeker from Yemen, has become savvy with her smartphone and receives job alerts on it. She helps out with the classes as a digital champion, and like HL3 uses Reed’s to find job openings both in Sheffield and her home country. She said, “I get alerts from Reed’s. I email my CV and register with job agencies online. The agencies email me job vacancies I might be interested in.” We talked about whether she follows any local Sheffield companies on Twitter: “I follow Sheffield Enterprises, but that’s it’. She says that – at the desktop computer, as opposed to the smartphone – “I look for jobs and also look for houses in Sheffield. I’d like an admin job”. This job seeker feels that it is hard for new people to find any jobs in Sheffield and has found the job search difficult and after a year-long search. Hence these classes, which form an important part of the infrastructure network in Sheffield, keeping learners connected with the digital economy which also serves to connect them with opportunities.

From the discussion with HL1, employers generally expect some level of computer literacy, some formal education and the desire/ability to learn new things. They also want to see some work experience to show that an individual can function well in a particular workplace environment. This brings me to highlight the experience of a female learner in Pitsmoor, HL6. She was employed full time as a data analyst, but came to classes to learn more about Excel so she could use it at an intermediate to advanced level in her job. Her current company refuses to pay for her training and does not wish to support the time away from work that she spends learning during office hours. At the same time, she cannot afford to spend several hundred pounds to upskill to the company’s desires. It appears that austerity measures and the recession also affect corporate willingness or ability to pay for employee training. This forces the employee into a precarious position. The company’s attitude does little to encourage fine tuning skills given how crucial ICT skills appear to be to their business operations.

## Computer support

People frequently use computers as part of their jobs. Yet many of the learners I encountered through ICT classes were unemployed, underemployed or retired. This excluded them from being able to pick up skills in the workplace, or benefit from onsite ICT support for issues requiring troubleshooting. Overall, work-based computers are more protected than devices at home because they have virus protection that is regularly updated. The lack of a workplace also prevents people in these income and employment categories from adopting the skills necessary to succeed in employment. The workplace computer environment provides employees with help that is trusted and often times vetted, as well. Learners often do not have a peer group they can rely on for computer support and seek support from the few friends and family who have the knowledge and the time to be able to help. One of these external factors is undoubtedly caused by ceasing to be in a work environment. Simply having a job that does not require computer use as cited by Olphert and Demodaran (2012) comprises one of the features of a digitally disengaged population.

HL7, a retiree in his eighties who uses the Heeley Online drop-in centre, discussed with me how he enjoys shopping online at Sainsbury’s, particularly in bad weather when he finds it difficult to walk to the shops: “I don’t shop online often. There’s problems. I tried Tesco, but they didn’t want me credit card. So, I came today and Jon (the lead instructor) helped me sort the problem out. My confidence is better, but online shopping is hard”. Learners sometimes have unresolved computer issues which never resolve without help. But these issues just mount up. Some give up entirely. Others find solutions for a few of the problems and ignore the rest. You can go on forever (with an unresolved problem online). He advises learners, “don’t try to run before you can walk because otherwise you miss something online…and that can create problems”. This learner also conveyed how invaluable the instructors are, recounting, “I also have a printer that Jon helped me set up. I couldn’t sort out the printer. It was set up for Microsoft, but I had an HP printer. I couldn’t figure it out. HL9 [HL7’s elder brother, who is in his early nineties] helps me, too, when I have a laptop problem”. When we discussed the popularity of the classes and drop-in sessions, he remarked that “they are always very busy. Sometimes it can be hard to get help during a class because Jon is so busy helping everyone with the little problems”.

When computer difficulties reach this point, HL7 can email friends and family. He’s also tied computer usage to a hobby like many of the other learners: “I find Google Earth very helpful! Locating airports, parking and local places around the world is fun”. He uses both a laptop and an iPod at home and brings his laptop with him to the drop-in centre: “I like downloading music and listening to it”. He appeared circumspect about the price of broadband and is considering switching to Plusnet when his contract ends in eight months. There is also a misconception among learners that those with advanced ICT skills do not need troubleshooting help from time to time. In the future, he wants to learn more skills and wants “to take a course on photography and computers with Jon”.

While she enjoys the classes, HL28 doesn’t trust the Internet with her financial details: “I am frightened about it, but we (referring to her partner) want to learn how to do it”. She recently purchased a washing machine online, but “I don’t trust banking online right now”. She also thinks that “it’s important to try to keep up with things” meaning knowing how to function in a modern society. She uses technology to “download some TV series” and to read books. The classes are “really opening up all the things they can do online”. She likes to use her iPhone camera and store photos on the computer.

HL7 seemed open minded and self-assured about trying new things: “If anyone mentions something (apps or websites), we’ll go try it. They were a bit frightening to begin with, but I’m more confident”. He seems to be a prolific Internet user compared with many of the other learners. He has thus far has been using the Internet on his laptop for the past year to plan car journeys on MapQuest and to share photos. He is learning how to share his photos “through burning them and giving to friends and family, putting them on USB – getting more confident with cutting and editing photos through trial and error.” He concluded by saying “I feel like I have done well learning how to do things myself. Jon has helped a lot at Heeley”.

Another drop-in learner, HL27, came to class to learn how to send photo attachments to emails. She hopes the instructor, Neil, will tailor the classes to her individual needs – “the first lesson was too easy”, she noted. In the future, she would like to learn “desktop publishing (to make birthday cards) and maybe spreadsheets”. She commented on her “really limited needs and doesn’t feel like she needs a lot of courses as she’s not working.” She also expects that her learning will “evolve” as the course goes along.

HL9, a veteran computer user and HL7’s brother, comes to the drop-in centre to socialise with other community members (and learners) and to push his skills further along. He received a new laptop as a Christmas present and hoped that learning how to use it will help him become less isolated (because he can take it and use it anywhere) and will also help him to improve his memory. So far, he has learned how to use a keyboard and mouse. In the future, he wants to learn how to use public services to make doctor and hospital appointments, pay road tax and renew passports. He continues his learning at home by using the LearnMyWay website but he “made some mistakes and gave up at home.” He hopes that, even when the course finishes, the instructor will help him to continue his progress. While he has gained “confidence, I can’t remember the details of how to use things”.

It is important for learners to engage with the community centre and that it becomes a hub from which to navigate modern life with advice, encouragement and mutual support. I spoke to HL10 about how she heard about the course during TARA meetings and she feels it is important

*“because a lot of people in the community don’t know how to use computers. Every house needs a computer to do shopping, pay bills, to know information – anything. Everyone should know how to use it. The community centre is an important part of the area. It gathers people and lets government know what they need”.*

I spoke with another learner named HL11 who was taking a five-week course. She was unemployed, but although she had used a computer when she did have a job, she had forgotten how to use it, she said, and wanted “to keep up my skills”. She used her laptop at home to try to find a new council home using the Sheffield Homes website. She is frustrated about having to remember and retain the use of a pin number in order to use the website: “I lost the pin number and don’t know where to go now”. In the past, she entered the pin number once and clicked that she wanted to the computer to remember her pin, however last time it asked her to enter it: “I think that the computer has eaten it,” she joked. She then explained how difficult it is to get a new pin. She tried calling the Sheffield Homes website, but because they prioritise online inquiries, she placed in a long queue. After an hour, she got “fed up waiting in the queue”. So, she went to the housing office. She has to do this because she has one extra bedroom in her house and will be charged for it: “this is very cruel to be forced to move”. According to her, there are no two-bedroom houses available, only flats, and she feels like she is giving up a lot moving from a three-bedroom house into a flat.

HL11 expressed frustration with the Internet: “I get fed up with new technology”. She found that most people already know how to use computers and social media and mentioned that she doesn’t want to talk to strange people on Twitter. But she liked the LearnMyWay course, feeling that it helped her confidence and was “right helpful”. She’s hoped that the course would help her become more “independent” and liked that it gave her a booklet to help her learn from home. She did mention that she finds the operating system differences between computers confusing and hard to keep up with.

## Computer aspirations: Being part of modern society

Learners aspire to acquire more knowledge and better skills. It takes perseverance to work through the classes and the ability to practice outside the class environment. Some attend both computer and English language classes. The computer classes also support some of the learner’s language skills because they can tap into e-learning opportunities online. One learner, HL12, had very limited English and had moved to Sheffield in 2010 from Somalia. Like many others, he wanted to be part of “modern society – use emails, everything”. HL13, another learner said that the computer classes “slowly increased my confidence coming as I had never used a computer before”. Finding a hook as motivation for using the computer is key, to prompt learners to keep up their skills. HL24, for example, likes reading about football matches from past decades. He thinks the computer class is important “because it brings people together if they want to learn, learn new things, meet new people from different countries”.

Lastly, I interviewed HL14, a TARA leader who has lived in Pitsmoor for fifty years. The classes make use of the computer suite in the Vestry Hall. It used to be utilised daily, particularly by Learn Direct, but no longer after government cutbacks. She maintains the view that the TARA will pay for the cost of the room for computer classes as long as there are enough people coming to use it – and enough staff. HL14 became the TARA leader after money ran out from ‘New Deal’ – “that stopped and pushed me to get involved. We had a TARA that ended five years ago, I started this one eighteen months ago. The residents needed something to help fight for them”. She strives to excel and reported that “everyone tells us we’re doing well – organising trips for tenants and paying for the UKOnline centre”. Pitsmoor is one of the largest social housing estates in North East Sheffield with “900 levy payers, so we get a lot of money to do things”.

The TARAs advertise the computer classes on noticeboards, posters and in community centres. The Jobcentres also push people to attend classes and naturally there is an expectation that people will convert to e-government for services. HL14 stressed that these are free courses that aim to give people confidence, so that they can go from having “never touched a computer before to go on to fill a form in apply for a new house, they won’t know how to do it. These classes give them that confidence even if it’s only two to three weeks. They get that bit of confidence to try it”. Seven regularly attend the classes at this location and sometimes people from other areas come to these classes if there aren’t any being run by their local TARA. She talked about HL2 and how the Job Centre “got on his case to get a job, so he has come for a few weeks to get confident”. She also explained the concept of time in the area – how people are very laid back, so walk-ins are the norm. She said that “if we put rules in saying you have to be here for one and stay until 3, they wouldn’t come. Even if they come for an hour, that’s fine with me as long as they learn something. Sometimes they leave any time if they have to get children too”.

HL14 talked about her own computer use. She’s been using a computer for ten years, on and off. She has “a load of certs at home for word processing, spreadsheets, presentations and posters. I do posters for the TARA for our day trips, so it’s taught me quite a bit. I am not as frightened now as I used to be. I don’t care for shopping online, but I email others in the TARA about meetings and news. She doesn’t know how anyone can just sit at home: “I can’t sit at home. I did some courses at the Marshall School and West Street. I’ve got a computer at home but using it is not the same. The mindset is not the same at home as it is here”. She summed it up by saying learners ask librarians,”’Can you do this for me, how do you find this out?’ They can’t be showing people what to do. They can log them in and that’s it. There’s also a thirty-minute time limit, so it’s hard to have a play”.

Some people will never want to learn how to use a computer and the learners often find themselves having to help friends and family with their online activities. HL17, another TARA learner, stated that, “my partner is frightened to death of computers. I set everything up for him to check his lottery numbers. He just has to come up and press one key, but he wouldn’t do that”. Yet the realities associated with trying to establish a safe space remain challenging. The Pitsmoor TARA did not have the space as it was lost to a family flat, nor would they be able to secure a computer lab for their residents which would not be vandalized or vulnerable to theft. Westminster entered into a partnership with HDT only to find that they did not have the correct cable in which to access the LearnMyWay classes. Proper cable installation took precedence over their political and social aims. Throughout the interviews with TARA leaders, every one of them echoed the sentiment that although putting in the infrastructure necessary to facilitate ICTs at a community hub was not an exciting enterprise, it was necessary. Interviewees stated that this had to occur, or else the world would pass them by.

Some learners had six-week to seven-week courses, operated solely by Heeley, while the Sheffield Homes course was limited to five weeks. The first part of the HDT LearnMyWay course took seven weeks to complete. Sheffield Homes’ digital effort is solely designed to get social housing residents to use their website. It does not seek to build on their desires, which revolve around friends, family and being part of modern society. One could argue that searching for housing online is a feature of modern society, but many learners are forced to engage in this activity simply in order to survive. This method of linking classes to compulsory e-government usage does not help bridge a fundamental skills gap – one that ties people to computers based on interests, hobbies, friends and family. These are the types of ties which encourage computer usage among all three cohorts.

## Networking and engagement is key to recognition by public

This section of the discussion highlights two essential networking and engagement issues which impact the learners’ lives. First, I will discuss how learners network and how capital builds from their existing social connections.

Learners feel they do not have a voice or visibility with regard to the issues that affect them the most. They feel that they have lost control of their communities and that their ability to survive is threatened more than ever. They perceive that those who shout the loudest and spend the most money in society wield the most influence in decision making. This also extends to consumerist behaviour and parity in communication channels such as social media (Aula & Laasonen 2010).

Online political participation is commonly determined using a set of activities. This includes writing emails to politicians, networking with like-minded individuals online, and sharing political posts on social media(Calenda & Meijer, 2009; Hoffman, 2012; Kahne, Lee, & Feezell, 2012; Livingstone, Bober, & Helsper, 2005). This online participation was cited as very important among the learners. It was stressed as much as the need to learn how to trust a computer with shopping, credit cards and banking details. There was a performative element frequently observed: learners stressed the need to learn how to write and send emails to local councillors as trying to discuss issues with them during surgeries or visitations proved to be ineffective for conveying their needs and actually having them convert to a positive outcome. HL7, the aforementioned octogenarian Heeley learner, stated he was taking the courses because he wants to be able to write letters and send them to local councillors.

The TARA groups serve to represent and advocate for the interests of the social housing tenants and residents. They also represented a significant percentage of the computer learners I interviewed. It appears that their efforts to partner with HDT coincide with the rise of Digital by Default and the severe funding cuts experienced by Sheffield Council. The TARA leaders all shared stories about how difficult it has been to provide computers for their residents to utilize in a community setting as a shared space and even to have the space adequately served by broadband. For many of the leaders of these TARA groups strongly express the desire to connect and the fear of exclusion from social and political life.

Shiregreen’s TARA leader, HL26, who was also a computer learner discussed the how she had set the TARA up eighteen months before the interview after the previous one had folded five years earlier. She set it up, she said, because “I thought the residents needed something to help fight for them”. It struggles, however, recruiting younger people because couples are busy working two jobs and raising children. In the past, women had some more free time to become more involved in the community because they did not work. As a result, the TARA has a core set of members who are close to retirement age.

HL14, a TARA leader from Pitsmoor, mentioned a fear of social media, particularly Twitter, where it is common to “tweet with strangers”. They are more comfortable, however, engaging with Facebook and Skype with their family and friends. This indicates less inclination to socialize through bridging social capital among the earners as they regard people outside of their families, friends and the faces they see in their community as “strangers”. They also expressed some confusion about Twitter’s purpose and this generated discussion over whether it served any purpose in society at all.

## Community and its pursuit of recognition

The promise of connecting with friends and family online is an attractive lure to induce people to take the classes. HL15 was motivated to come to these courses in hopes of learning to engage online with her grandchildren, who have been pushing her to learn, and also from a desire to be able to email relatives who live in foreign countries. She is a widowed retiree. She marvels at her grandchildren’s ability to use computers and wants to be able to emulate that. She voices a strong sense of not wishing to be “left behind” by her children and especially grandchildren and sees that as a challenge. She is nervous about her progress at this time and lacks confidence in what she can do, but she does feel that she is making progress through the course. She likes to be shown how to do things and to repeat them and learns better by doing than by being told. She is using the courses to decide whether it would be worthwhile for her to purchase her own computer.

HL16 had never used a computer before coming to these courses, although she had previous experience of working as a typist. She expressed a sense of nervousness that she might “break something” if she tried to use the computer outside the scope of the course and is glad of the support of the courses to help her build some confidence in her abilities. She found LearnMyWay useful, having been able to navigate the lessons and correctly answer the questions, which gave her a sense of pride and accomplishment in her achievements. She felt that it was able to teach her something, despite her background of having no knowledge at all.

She voiced concern about using computers for other online tasks such as paying bills. She feels that other people could intrude on her private business if she pays her bills or applies for benefits online and feels a strong sense that her privacy is not respected enough online: “I worry about the privacy. I don’t trust it’. She is a TARA resident and lives near the location of the meetings, which she finds very convenient. Although there have been some challenges with the recent weather causing the computer classes to be cancelled, she says that she is “keen to keep coming”.

HL17 moved to Castledene about eighteen months ago from Woodhouse. She moved because she was very ill and wanted to be closer to her family, as they look after her. She joined the classes to meet other local people and learn new skills. She is also part of the TARA committee and has been attending the classes for about three weeks. She is progressing along better than she initially thought she would. She also has a laptop and now knows how to operate it. Every evening she goes back through the course and practices what she’s learned for a couple of minutes. She had a minor criticism of the course, noting that the website doesn’t allow you to go back and practice certain things. She likes to use Facebook to connect with family mainly and some friends to look at pictures and their comments: “It helps me feel part of their lives”. When talking about loading photos onto Facebook, she said, “I have a mess and sort of work out which way to do it”. She found out about the course from the TARA meetings.

“*It’s the council and the government that is killing community. They don’t want to know…(what our problems are)”. TARA Leader, Shiregreen*

This is an important quote because it appears that the computer classes and e-government initiatives serve as a buffer between angry, sad, anxious, worried and stressed social housing residents and governmental representatives. Certainly, residents see the benefit of taking computer classes and even enjoy doing so. TARA leaders strive to make their communities better places to live. They act as a collective which organises computer classes, fairs, markets and tries to bring their issues, concerns and grievances to local politicians. In their view, a good leader is one that is able to negotiate with councillors for change and relay that information to other community members during one of their four times yearly meetings. A leader at Bishopsholme, HL18, stated that the residents in her community no longer trust its leadership because the council does not deliver on its promises to them. “The community have no faith in us anymore. We didn’t get half of what was promised: new boilers, windows and roods. It has been going on for years”. Is a leader, therefore, only measured by what s/he achieves or can influence? Is there a *public issue of trust in who delivers a message and what it says*?Or does media influence, in part, stem from the ability to change the narration/perception of a story? For example, professionals and elites carefully control and craft their own narration so that they become more visible. I will explore this idea further in this chapter.

I will begin by talking about a divergence between what TARA leaders perceive to be happening and what is actually occurring within their communities. The ability to influence their lives and the pressure to “modernise” appears to be happening at both local and national (UK) levels. A number of external pressures were developing that negatively affected the local social housing residents: universal credit changes, Digital by Default and the Sheffield Homes online services, Localism and the disbandment of the community assembly with the new ward-based approach to local decision making. Universal credit changes were introduced in 2013 which proposed merging working-age benefits and tax credits into one payment which is known as universal credit.

HL19 stated that, “all you want to do is to do good and to help people”. Another, HL20, expressed the reason for his community organisation leadership activities (Crosspool) as “trying to bring people together and enrich and improve surroundings for the people who live here”. The ideas of community and home are intertwined for the TARA leaders. HL18 explained that:

“*her life is up here – it’s always been here and always will be. I have friends and that’s what it’s all about. It’s not what you can afford. It’s a social centre and important to people – the community is very connected. Everyone is upset about the lack of funding and support from the council”*.

The Sheffield Home computer classes provide some of the only funding and support from the Council to TARA residents and it is needed. Perhaps this requires further investigation/analysis. I am not sure what is being said yet. Two issues appear to be emerging. Local information and news is not being assembled and disseminated well, that is, in a manner that assuages the fears of those who are dependent on government. In addition, the e-government initiatives, while efficient and a good value for money, dehumanise and depersonalise the relationship between the state (both local and national) and individual communities and people. TARA residents and leaders both express anxiety over the proposed changes, but relent and say that their “voice has never been heard unless it’s an election and they use the community centre”.

Leaders in Bishopsholme (HL21), Darnell and Burngreaves asked in a general way “how can we influence decision making? How will our voice be heard?” The leader at Crosspool (which is not a social housing community) feels he has more influence on local decisions. He cited an example in which he organised the community to keep the parking in front of the local shops when someone had proposed that it be abolished. This small victory helped to cement his perception that he has local influence. Perhaps it is the sheer number of welfare and local governance changes that contribute to the feelings of powerlessness for the social housing communities. One participant stated that, “it goes to the top end of government – they don’t see how it is for a single parent of two little girls – what it’s like to struggle on the dole money. And now we have to pay a bedroom tax. Why do they want to take that home away from us?” The perception of invisibility is key to this statement. These individual TARAs and their residents lack a collective visibility – online or in the traditional news media. The stream of rhetoric about people living in social housing damages communities. The Bishopsholme TARA speaks to their local councillor twice a year about the issues that they face. Last year, in particular, they asked for a meeting with two councillors from the local assembly. They felt like they were politely listened to about the problems that needed addressing; and were doubly frustrated when nothing came of it. “There were no minutes. No acknowledgement of our meeting. Nothing more was ever said to about our problems”

I have identified at least eleven TARA leaders among the learner cohort. Generally, TARA leaders try to understand the issues in their area and advocate for the other housing residents. Some of the issues they noticed that were brought up during the interviews included community demographics (cultural issues and language barriers), housing conditions and the future of the community. A strong link exists between the development of computer classes, supporting the community’s efforts to become part of the modern world and being able to be heard by both the local and national governmental platforms.

Although the subjects who took part in the research described in this thesis were not necessarily appointed or elected public leaders, many function as community leaders. These community leaders fall into Hambleton’s place-based leadership definition (2014, p. 109), which includes “standing up for local communities against place-less power [to] energise collective action at the local level … and expands the public space in the city.” Civic leaders also work to change the context within which they operate. Hambleton (2014) contends that civic leaders are limited by the forces that shape places during specific moments in time. Citizen involvement constitutes an important albeit sometimes informal aspect of urban leadership.

TARA leaders state that they need help with housing management difficulties, integrating immigrants into their communities, safety and security issues and with the provision of classes for the residents. Many committee members visit people locally on a regular basis and go door-to-door to talk to neighbours. They try to find out from people what they like about living in the area, the problems they perceive and how to improve their living conditions or the local environment. Sometimes some of the TARA committee members compete with other local TARAs for resources, time and influence, concerned that the Council may be showing favouritism. This appeared particularly to be a concern among learners in the northern part of the city. I also noticed that all of the community TARA leaders that I encountered were women.

One of the challenges discussed with me by the TARA members involved how to involve and influence statutory agencies. HDT director Andy Jackson stated that they haven’t been contacted by the City Council in several years and that the lack of dialogue was troubling. TARAs connect with local social housing maintenance and management staff, police, local religious leaders, voluntary groups, local school leadership. The capacity to organise community change did not appear outside of Heeley and Crosspool. However, the TARAs were instrumental in identifying HDT as Sheffield’s leader in this area and supporting the process to bring the funding for the ICT courses to their communities.

Once people decide to form a TARA, they develop a steering committee. They meet regularly to discuss the needs and wants of the community, to help improve the area, to unite the community and to build community spirit. The committee members from each of the communities that I visited (with the exception of Heeley), identified the training/further educational needs of the residents. A designated committee member from each TARA takes minutes and produces a newsletter to distribute throughout the community. These classes serve to alert learners to future classes (not just computer classes), raise community spirit and allow committee members to learn to how communicate the collective, lived experiences of the housing estate effectively both within and beyond their neighbourhoods. Each class outside of Heeley that I attended had a designated committee member in charge of producing a newsletter for the residents. In all of these cases, the computer classes helped them learn word processing and/or desktop publishing to enable them to do this.

TARA Residents: #bedroomtax (tag used on social media to discuss current issues impacting learners living in social housing)

With the exception of the learners living in Heeley and Crosspool, twenty-five of the participants were social housing residents throughout the city. These residents rely on fellow community leaders to advocate to the city on their behalf. They meet frequently with their leaders at local community centres and discuss local asymmetries in funding, class availability or variety, facility and residential maintenance issues. These residents rely on a fixed income and are sensitive to the costs associated with Internet usage. Their subsistence relies on the vagaries of politics and they hold little trust in city or national leadership to understand their plight or the way policy changes affect their lives. They are also the most digitally deprived group, struggling with both exclusion and literacy issues. In addition, they are facing the most change. Many policy changes have occurred in a short time period: Digital by Default, Digital Deal, Universal Credit, the bedroom tax, the introduction of the Sheffield Homes website to manage the residents and the ending of Community Assembly meetings are shattering their community spirit. TARA leaders fear that this group is losing its voice, its ability to communicate. HL8 stated that: “communications is important. If we haven’t got knowledge with these computers, in the time to come, we won’t be able to communicate”. Many feel left behind by computers and society.

The residents participate in the classes for a variety of reasons, one nicely summed up her reasons, “the courses have been very positive for the community, I have made a number of friends through attending the classes and feel that I can get [out] and meet others and learn as well”. Many had participated in classes before, but do not retain the information because they do not regularly use computers. One learner said, “I decided it would be useful to have a refresher course, as everyone had forgotten some of what they had learned previously. So, I spoke with (the TARA leader) about it”. (The implication was that this helped influence bringing the class to the community.) “I love using the computers and the things that you can do with them”.

Some residents act as vectors or gateways to information for others. One resident, from “Ignore-wood” (Norwood). HL22, stated, “I help friends with the Sheffield Homes website. I will read and helps friends with their Sheffield Home letters and notices and try to find out the information for them online”. Another learner from Norwood, HL23 explained that she decided to come to the five-week course to learn how to write letters to her councillor on a computer to advocate for her community.

A couple of the learners take the computer classes for educational reasons. One immigrant from Yemen, living in Burngreaves, found the classes helped him to learn English. Another learner, recovering from a brain tumour, stated that the classes helped him find a hobby that he could do at home because he could no longer work. The community aspect of the classes came up with another learner from Burngreaves. He mentioned the diversity of the learners, “they come from all over the world and I get to meet new people”.

The residents also conversed about receiving community information. Some were involved in putting together the newsletter and were learning how to do that at the computer classes. Others mentioned the frustration they felt when all local and city information is put online. For example, local forums and councillor surgery times are only published online and many residents have difficulty accessing these. At the time of these interviews, HDT was trying to secure funding for the introduction of computer hubs within the community centres so that residents without a computer could still access their services.

HL23, from Norwood (not a leader), was very concerned about how to influence local government decisions – particularly concerning tree damage to local property. “I want action and the Council doesn’t fix problems”. She regularly attends community assembly meetings in order to make sure local money is well spent and includes her community in the decision-making process. She wondered if the only way to influence local decisions these days is on the Internet and was very worried that face-to-face meetings were disappearing. In short, she sensed a significant cultural change taking place and felt confused about her ability to continue to monitor local decisions.

Many residents talked about the problems that they had pertaining to property maintenance and environmental concerns (tree roots damaging house foundations) and how the city promised much and delivered little. While it was clear that the communities welcomed the computer classes, it was also clear that they would rather the city fix their home problems. In addition, the daytime class hours proved to present a difficulty for many people hoping to access the courses because some people were caring for children or grandchildren during these times. Sometimes learners had to miss classes because of childcare commitments (either a child would be home sick from school and a grandparent would need to look after it, or it was half term). In any event, over a five-week course, it is difficult to maintain progress if even one or two classes are missed.

## Conclusions

The Heeley learners are determined to be less digitally isolated and become digitally engaged. For this cohort, the digital divide is no longer an access issue. Rather it manifests in a number of ways and is largely hindered by the large swathes of policy changes impinging on the social housing community’s survival. While this cohort faces an uncertain economic future, like the rest of the Country, their job prospects suffer the most by the lack of digital connectivity and media ubiquity. These included having access coupled with on-site support, learning how to cater their job search and applications to a specific post using an online system and even how upgrading their skills. Job seekers lack the support necessary to navigate the system effectively which leaves their employment aspirations unfulfilled and impossible to flourish.

Their lack of network, social media or otherwise, also greatly reduces their job and housing opportunities. In terms of their social media usage, while they take small steps to learn how to use it and start with bonding ties, their visible networks suffer from a lack of time and depth necessary to build foster strong ties. Their networks also lack diversity of bridging and bonding ties. Their social media networks demonstrate a lack of bridging ties, particularly local resources which can be harnessed in job seeking situations. As a result, when they fill in job applications online at Matalan for example, there is nobody they can turn to necessarily who will be able to know the hiring situation in the retail sector, or how likely they are to secure working hours that fit around their home life. This leaves them bereft of vital knowledge and information locally about employment markets. In sum, survival and upward trajectories are curtailed by the structure of social networks across all aspects of the learners’ daily lives.

The Interactivity Framework, found in Chapter 3 page 82, depicts an idealized, hypothetical pathway toward social media presence. To this end, the learners’ progress on this Framework is set out following this paragraph. In the Learners’ Interactivity Framework, Among the learners who participated in this research, some were beginning to use social media to connect with some select friends and family. A few of them even sought to connect their profiles with their neighbourhoods such as posting photos or sharing local news. This gives them some voice within the network of their social media connections. This Interactivity Framework is somewhat limited in scope and its ability to representative of the learners’ cohort in general because many do not sue social media. Of the estimated 20% of the learners who do, it results in about 60% of potential social media interactivity because their usage is limited to only Facebook and connecting with family members and some friends. If they use Facebook, it is likely they use a smartphone as well. However, the relatively small network focused on friends they have had for a long time and family limits their ability to generate social capital and, therefore having a voice. As a result, there is no visibility or social presence online among the computer learners. The areas which the computer learner’s do not tap into are coloured grey in the Interactivity Framework. The coloured sections represent the areas in which we see positive

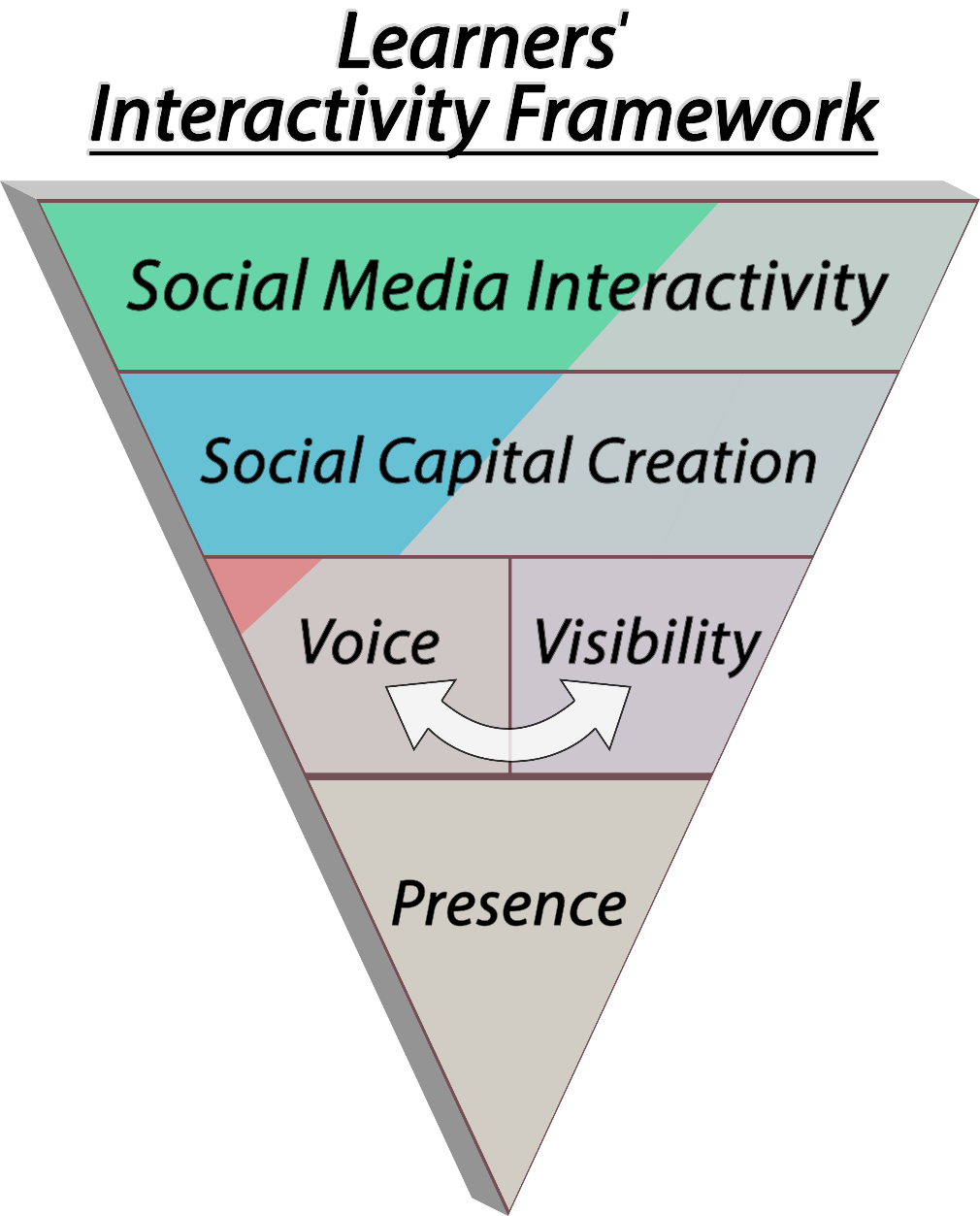
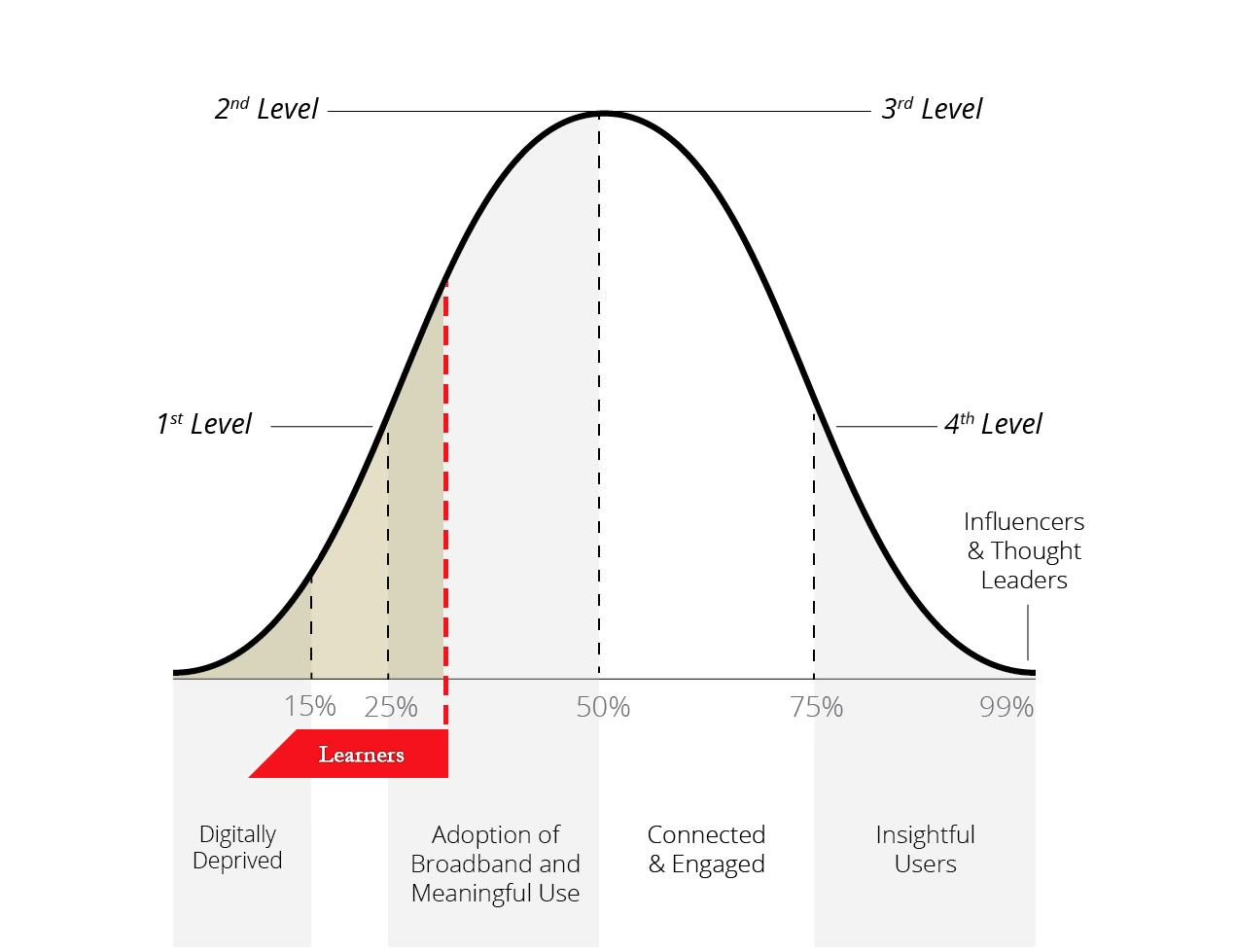


Figure 7: Leaners’ Interactivity Framework

Figure 8: Learners’ position on the bell curve representing the levels of the digital divide

As demonstrated in Figure 8, the learners exist between the first and second levels of the digital divide (Hargittai 2002). Many of them still face issues of access to computer hardware, software and broadband dues to cost and levels of support. Others may have access and are beginning the process of finding meaningful uses for the Internet. While about 20% of the learners demonstrated they are at the beginning stage of being Connected & Engaged, they primarily occupy the space between the 1st and 2nd levels. Those that are in the lower 15%, and are termed the “digitally deprived”, do not represent the learners. Rather, the curve shows that the learners have moved from a level of deprivation to the adoption of broadband and meaningful use of the Internet.

On the Spectra of Interactivity developed by this research, learners demonstrate high levels of Sociability and Technology/Data Linkages. This score reflects concern with access but also high levels of bonding social capital. It also indicates a general comfort associated with being social in-person. These are personal qualities which are highly valued among learners as their strong sense of community cohesion shows.

Figure 9: Learners Interactivity Spectrum

This section did not include a discussion of pervasive awareness as many of the learners did not demonstrate that their knowledge of strategic network reach extended much beyond their local community, their TARAs, and the governmental institutions which support them. However, as many of them do not venture much beyond their communities, they also tend to be significantly more geographically isolated than the other cohorts. This isolation includes social and geographical in nature. Socially hidebound in nature because locally based bridging ties are an important component of the digital age and their reach does not include these.

While it may seem a fundamental to obtaining recognition and some sort of public acknowledgement in general, the learners seek to pivot their lives from a strong core of family and friends. They are rich in bonding social capital, however, making the leap to bridging capital and the perceived superficiality that it brings to relationships makes the learners uncomfortable. Furthermore, learners seek acknowledgement, not from the public, but from the government first and foremost as contributing members of society with a voice. The goalposts are constantly shifting both technologically and socially which is leaving an entire group of citizenry behind to scramble to find the rules of engagement.

CHAPTER 6: KNOWLEDGE PROFESSIONALS’ INTERACTIVITY

Sheffield, at the time of this research, was investigating the possibility of developing a “cloud-based” city to serve as data warehouse to the global marketplace. One interviewee stated that the Cloud City concept was being pushed by a special interest group within the business leadership strata. However, the interviewee whom I will call KW7 stressed that a lot of Sheffield’s business community wasn’t buying into it: “there is a real mismatch between the overall strategy and that which is wanted”. He gave some history of the current situation. KW1, one of the knowledge workers at the Electric Works, stated that “the new economic development plan does not take into account the fact there is no money and they don’t describe exactly how support will be provided when there is no money”. This interview confirms that the economic and systems architecture of the city were being melded together into a cohesive strategy dependent on human capital, broadband infrastructure, data and platforms. Some objections remain in the pursuit of a technologically-friendly built environment. KW1 explained his objections to the data approach: “cloud is money-intensive and will not produce many jobs – maybe 150 jobs. The money from the data centre goes out of time. It will employ people to build the centre, but that will be it, and all the money that is needed for it will just flow out”. One participant expressed his hopes that Sheffield and the UK can get more infrastructure in place in order to change the culture from one that merely consumes information to one that “adopts a content-creating type approach to media”.

## The knowledge workers who participated in the research are referenced in the table below:

|  |  |  |
| --- | --- | --- |
| **Professionals’ Moniker** | **Gender** | **Location of Work or Residence** |
| KW1 | M | Electric Works |
| KW2 | M | Electric Works |
| KW3 | F | Electric Works |
| KW4 | F | Workstation |
| KW6 | M | Workstation |
| KW7 | F | Workstation |
| KW8 | M | Workstation |
| KW9 | F | Sheffield City Centre |
| KW10 | M | Electric Works |
| KW11 | M | Workstation & Electric Works |
| KW12 | F | Sheffield Other |

## User generated content and professionals

Content creation interactivity drives the knowledge worker’s quest for infrastructure. Digital technologies and their related industries, particularly those enabled by broadband, play an increasingly important role in cementing creative practices (Bell and Jayne 2010). The Department of Culture, Media and Sports (DCMS) defines the *creative industries* as:

“activities which have their origin in individual creativity, skill and talent, and which have the potential for wealth and job creation through the generation and exploitation of intellectual property. These… include the following key sectors: advertising, architecture, the art and antiques market, crafts, design, designer fashion, film, interactive leisure software, music, the performing arts, publishing software and television and radio” ([DCMS Creative Industries Task Force 1998](http://www.sciencedirect.com.ezproxy.lib.purdue.edu/science/article/pii/S0743016716303436" \l "bib11):10).

For knowledge professionals, the value of fast broadband comes down to its integration in their daily lives. KW1 stated that Sheffield was committed to investing in the “infrastructure of communications” which serves as an attractor of talent. Technological advances continue to confuse even professionals. KW2 pointed out that people paid 1 p per minute to use a modem and get online. In the last 10 years this has changed dramatically. The speeds available now have gone from a kilobit to a gig (as of 2014). As scale, scope and speed continue to progress, KW2 theorized that people will consume more. The way we receive information is changing to accommodate household usage of: 2-4 iPads/tablets, 2-4 iPhones or mobile phones and 4 laptops per household. KW2 also predicted that an urban threshold for service will emerge from household saturation.

## Interactivity and content creation in working life

The infrastructure usage of knowledge professionals centres around

having the appearance of being connected to work 24/7. The periphery of the workday office hours deviates from the traditional notion of two separate spheres: work and private life. A growing number of researchers have recently brought to the fore the aspects of smart mobile devices that extend and intensify the workday (Chesley 2014; Chesley & Johnson, 2015; Loeschner 2016; Moen et al. 2013). As discussed in the literature review, these studies highlight a facet of the information society in which one must engage in pervasive awareness.

The ability to complete work outside of the office, otherwise known as “peripheral work” happens as a result of devices. For example, KW6 expressed some dissatisfaction with how little separation existed between home and work because of the tech he uses: A Mac, a Linux server and a smartphone. He described the broadband used to service these devices in the following way: “only think of it when it breaks. It’s fundamentally important like water… as fast as we can get it, but for a sensible price”. He uses the digital region superfast service.

In past research on the digital divide, these features were often discussed as issues of “access”. In this case, this interactivity category emerges as one of many features important to connectivity and engagement. This research, however, is concerned with what one does with connectivity – interactivity is a noun, and a by-product of connectivity. In terms of data and infrastructure access, this feature has developed into a more complex issue recently, with the emergence of the technology-mediated communications. Tech infrastructure is remains especially vital as it involves technology often (not always) frequently take place between individuals that are physically apart. The technology unites them. Thus, their digital and data usage illustrates how smart mobile devices are viewed as symbols of control and autonomy, productivity and effectiveness among knowledge professionals. In addition, a number of studies on smartphone use among knowledge professionals show these technologies manifesting as symbols of success and status that is associated with such devices (e.g. Mazmanian, 2013; Middleton, 2007; Mazmanian et al., 2005).

Leaving a digital footprint alerts other users to one’s presence between multiple digital platforms. One of the knowledge workers, KW11 commented on showing up for work in the digital sense. He said:

*“Even though I wasn’t physically there one or two days a week, so there is a lot of hands-on remote – actually more remote than hands-on but it is as though I was there. I am on the phone once a day at least – I try to ring them once a day to give a voice to ask how are things? I’ve just sent out appointments today, use the calendar. I am on their server. I have left documents, so it is as if I am there. In their mind, I am because, you know, I’ve got an office I might as well have a door and be physically there, but, actually, there is no difference with what they see. But being here, it’s the same server, the same email”.*

The office presence extends beyond the periphery of the normal workday.

I turn now to a discussion of the value of user-generated content (UGC). It has long been associated with a monetized process yielding economic benefits (Zajc 2015). It includes social media forms which are “created, circulated, valuated, quantified and monetized by those platforms” (Chia 2012: 421). UGC potentially includes one or more of the following activities: blogging (microblogging), uploading or browsing images on Instagram/Flickr, communicating with friends or colleagues on Facebook or LinkedIn, uploading videos on YouTube and posting information online on Wikipedia (Zajc 2015). UGC is regarded as both an economic and social process – these are important, but often obscure distinctions. Fuchs (2010; 2012) defined UGC as an extension of labour, one often exploited. As such, it constitutes an economic form. Indeed, Arvidsson and Colleoni (2012) also conceive of the creation of media content that is shared and circulated as an economic process. The social process aspect of the UGC conception revolves around the outreach and participation of audiences (Ford and Green 2013). Yee (2014) contends that user experiences of technology greatly influence the drive to create content, in addition to influencing the depth of interactions that take place. Mobile technology cannot replace fixed broadband for intensive, high-end usage, as it offers a higher and more consistent speed of service. Moreover, fibre, one of the main broadband technologies, offers symmetrical upload and download speeds. Other technologies, like (air-based) mobile are predominantly asymmetric, with higher download speeds, but slower upload.

The interviewees mentioned numerous content creation channels such as LinkedIn and Posterous, which is linked to the website (Posterous is a now-defunct blog server and has turned into PostHaven). Blogging provides a narrative of work for many of the knowledge workers and is linked to LinkedIn and Twitter. This multi-channel content push allows global contacts to see and respond in a timely manner. In order to distribute time asynchronous content to a global audience, delivery is managed via Hootsuite or Tweetdeck platforms.

Dealing with the dispositive of social media acknowledges that a gap exists between profits and benefits for the creation of monetary value inherent to participation. Generated content broadcast using Tweetdeck or Hootsuite platforms give the illusion of working, and being productive, 24 hours a day, 7 days a week. Several of the knowledge workers reported using a management system to maintain social media accounts. KW2, for example, uses Tweetdeck which “manages the Twitter accounts because it effectively organizes monitoring followers and conversation maintenance lot of people and it’s impossible to follow a conversation without having issues separated into columns – which is a function of Tweetdeck. So, I can use it to search what people are talking about. Beyond that, he uses Sprout Social. He also feels like he needs tools that show him numbers of people engaging even if he doesn’t believe numbers as a pure measurement. People that you work for want to see numbers”.

Two knowledge workers expressed frustration that Sheffield residents re-engineered their processes and behaviours to embrace media technology. They see “enormous potential” in taking advantage of technology. He described Sheffield as “really funny in that you have a lot of dyed-in-the-wool who have been going awhile… who aren’t in creative digital segments and don’t understand the possibilities of embracing technology and social media”. Three local businesses cited as embracing the possibilities of digital media technologies include The Street Food Chef, which uses a big TV in its café with a live Twitter feed broadcast for customers. Our Cow Molly, a local dairy and ice cream producer, also uses Twitter well and is “hugely popular”. Customers can contact them on Twitter saying, “we have run out of milk and ice cream and could they please drop some more off in the morning, thank you”. Few have embraced their online ordering process so visibly on a platform for everyone to see. Then he said that there’s a faction of small businesses in Sheffield who are “luddites” and don’t want broadband or fax. Their business model hinges on the telephone where “you just call in your order”. In other words, the content-driven sphere revolves around a culture where one produces and consumes the content. In the example of Our Cow Molly, by visibly tweeting the order, the milk consumer is also producing a product review on an open platform.

## Media data and analysis

Social media platforms seek to mimic neural networking systems (Zingale 2013). They also use artificial intelligence (AI) designed to mimic the human brain by acquiring knowledge through a networked learning process and identifying patterns (Ramlall [2010](http://onlinelibrary.wiley.com.ezproxy.lib.purdue.edu/doi/10.1002/pa.1468/full#pa1468-bib-0031)). This techno-determinism uses individual data: likes, dislikes, and a set of response behaviours to anticipate what may be of interest. They have mastered the use of data and its analytics. As such, companies have conquered the social networking platforms and seek a larger, more profound target: the urban, metabolic environment. They desire to define and lead with the best smart city practices to solve all of the city’s urban problems in an efficient, practical way. Ashton et al. (2017) point out that big data’s ontological and calculative practices change not only the definition of urban issues, but their analysis as well.

Urban big data practices challenge the notion of privacy, even when they exist in the public sphere. KW3, one of the participants, remarked that “cities, people and companies know they need a big data strategy, but don’t know why. As companies start to use it in different ways, the availability of it will become massively important”. The question of how it remains important is still being explored. An example of how big data mining created the hit TV show “House of Cards” was provided to me during an interview. As it is still early days for “open data” and “big data”, governments and organizations are uncertain how to effectively organize it, analyse and then use it for the public good. One interviewee, KW5, noted that “actually local government is quite an interesting situation – the data that tends to be most useful tends to be national level datasets, so there is a problem of getting local authorities to feed all their data into a national grouping or dataset, or a central repository, and we don’t really have that at the moment”.

In the case of big or open data, one may ask who constitutes its audience? And, does the knowledge professional who desperately wants a particular data set to analyse and then sell the information gleaned from the analysis constitute the public, or the public good? The general population of Sheffield, as in many British urban centres, is not concerned with the issue of data, but many knowledge professionals see it as a potential income stream if they are able to leverage it into valuable insights for the government or for a business entity. KW4 and KW11 conveyed the following statements about the general public’s disinterest in data:

*“I’m not convinced that open data is really on the radar of people in local government and in the local areas. People like to go on the council website and find out information, but I’m not sure it’s something where there are many people lobbying their local councils (for this data information).”*

KW4 also stated the following:

*“I think open data is something that is quite important in terms of the benefits it could deliver, in terms of providing insight and decision-making data, rather than the ability to create apps and then use those for something, particularly in health data, but I think it is unrealistic to expect the general public to take a detailed interest in all of that stuff.”*

Data is beginning to emerge which presents a problem of how it is ordered and defined. KW4 discussed the problem of organizational culture, public scrutiny and acceptance of data use by the public. He said that “it is too early to say that open data is being transformative… in the public sector, but it is certainly, organizations like the Ordinance Survey. They were initially reluctant, and they were forced to release quite a bit of open data and they have made the most of it and they are more comfortable with it, and it has changed their outlook.”

Councils, and local government in general, appear reticent to release data because it has the potential to enable the public to further question their decisions. In essence, the openness invites further accountability and “performativity”. Shelton (2017) argues that sources of data are changing the way decision makers conceptualize the urban environment, where quantitative analysis is valorized as the only approach to evaluating impact at the local level among Councils. This is stated because one of the knowledge workers was also a public servant and had to demonstrate positive social media analytic impacts for her position. Yet the Council had no reasonable comparison of these numbers.

Open data remains a potential economic minefield, however, for those that appreciate numbers and presenting them in ways that resonate with decision makers and urban leaders. This new type of urban content formation (an urban environment reliant on data models and snapshots) holds promise for some of the knowledge professionals. This area will continue to develop.

The knowledge professionals outperform the other two cohorts in terms of their infrastructure access. Multiple devices such as iPads to Samsung smartphones proliferate among broadband, apps, data uploads/download, speed and platforms. All of these combine, and indeed, entire the professionals to create content. The content creation and upload to a platform itself is not enough to drive the digital economy – an audience is required. This brings the discussion to the next interactivity component: networks and engagement. The knowledge professionals benefit from access to multiple devices, data, platforms and connectivity options. They also consist of content creators. For their survival in the economy, the ability to showcase their work and maintain social network ties on social media is necessary for their success in the digital age and is entirely self-reinforcing.

## Networking and engagement

Social media networks have become a prized commodity among the knowledge professionals, yet there is a paucity of research to show how these networks are created and maintained in an intraurban area. Several notions exist simultaneously within this commodity based on participative cultural norms: it is at once meritocratic, egalitarian and diverse. The participative culture of networking and engagement under the auspices of social media is said to offer new routes to social influence in the political realm, particularly outside of the conventional elites. In order to analyse these notions, one must unpack the knowledge workers’ discourse to reveal the pathways of participation in networked culture. Online participation in networks allow for the opportunity to create and share work, while also developing a variety of participatory skills which also constitute a form of digital literacy.

Knowledge professionals maintain a variety of social networking platforms. Twitter, Facebook and LinkedIn form the basis of this piece of research. While Pew Research reflects US rather than UK society, it has found that fifty-eight percent of survey participants (Duggan, et al. 2015) had at least one Facebook “friend” who was also a work colleague. Many employers also utilize social media sites to encourage internal communications and bonding among co-workers.

## Location and networks: Who you know is most important

The ways in which professionals learn to network and engage with those connections relies on their office/work environment within the city. As KW6 told me, “place has played a huge part in my career path and my ability to network here.” All of the knowledge professionals either work from the Workstation (now Electric Works) or did at one time. It is an open secret that the Electric Works allows creative and digital professionals the appearance of keeping an office at this location for a nominal monthly fee. Its tenants receive a messaging service and mail collection at the location.

For the two professionals located in Heeley, they left the Electric Works and/or Workstation location in the city centre due to having already established their business networks and relationships and opted for cheaper premises. KW7, who works for a digital arts charity, spoke about the many discussions he has had with planners about how to integrate cultural functions/activities into buildings and imbue them with a spirit of creativity: planners “stop talking about them and you are no longer invited to the table. We are expecting people to come along and ask, “can you help us?” and they do, early on, but then they stop involving us. We were involved in two or three EU regeneration projects, but when it comes to capital-led projects, they don’t know how to integrate with cultural organisations: the tactile is coveted over the digital.” This research, as it pertains to knowledge professionals, does not support KW7’s view. Rather, the tactile (meaning media content) wins out over the digital arts due to the perception that the arts do not transform into a monetized commodity in a short time span. Further, Liu et al. (2010) confirm that network heterogeneity among professionals stimulates creativity and their position in a network. This view becomes problematic as KW7 said that his work “lives or dies based on how the perception of digital (arts) affects the ability to receive funding or support”.

I talked first with a professional who called his business a full service creative agency that works collaboratively with others in a team of three including one programmer – he summed it up by saying “we’re very keen on that as a methodology for the business”. This methodology involves employing freelancers, or the self-employed, already embedded in the professional network. Self-employed knowledge professionals work in a labour market that is flexible, dependent on contracts and negotiated through network arrangements (Fenwick 2012). For Sheffield, many of the professionals felt that “once you build a business and network it into the city… these precarious arrangements rely on opportunities within exclusionary social networks. It’s impossible to move. You end up tied to the location”. This statement matters because local social networks are not necessarily mobile, and are rooted in place for these professionals. The ability to uproot themselves professionally from the city feels impossible. After many years of trying to work with planners, two interviewees expressed the need to “focus on one’s own agenda” and “finding key people to work with on specific projects”.

As the recession in Sheffield took hold, KW9, one of the participants stated that she feels that networking meetings are harder to organise and have less value unless they have a great speaker at the front of the room – and those people are getting harder to get. New university graduates want to meet everyone and anyone who can help them negotiate the workplace and build up contacts – heterogeneous network begin to form. However, as an individual’s career progresses, homophilic networks develop and, as KW9 stated “you are a lot more picky about how you spend your time, and ninety percent of your business might not be in Sheffield or even Yorkshire. It is good to get everyone in a room on occasion however, and “share the love of your city” (Sheffield, in this case)”.

## Collaboration in the workplace: An overused buzzword?

All but one of the professionals participating in this survey work for a small-to-medium-sized enterprise, many of whom are directors or self-employed. Social media utilization by employees in small-to-medium-sized enterprises remains largely uninvestigated. While social media continues as a popular topic in general, much of the research focuses on the business-to-consumer domain, rather than the internal and external peer-to-peer relationships of the workforce. The offline interactions transfer into online media networks, which are used differently with variable impacts. I will begin by discussing how the knowledge professional cohort leveraged social media networks in their daily lives. The way networks form and flourish begins with offline encounters and relationships.

KW6 discussed how he networked within Sheffield in the early 2000s. The Council either sponsored or hosted networking events: “there used to be once a month meeting where the Cultural Industries Quarter used to get everyone together once a month. Then the Science Park took it on and brought higher class speakers. They used Euro funding to support that and that brought in Google and other great speakers”. Now networking is confined to global, themed and main events such as the documentary film festival/film events and TedX Sheffield. Without more context to this statement, it appears that the city tried to open up the practice of networking to coincide with diverse and global audiences, rather than select groups.

Another participant, KW7, described why he stopped networking locally in Sheffield. He uses social media to network on both local and global scales, but doesn’t participate in physical meeting any more with these serendipitous connections. He lives in Sheffield and will have “a beer/curry/coffee with one or two people (at the chief executive level), with people who he has a past with”. In other words, both stress the importance of the relationships developed at the formation of their careers and are not interested in new, local connections. The social network in these cases does not represent the only possibility for a professional relationship and the exchange of information. Both KW7 and KW6 discuss the importance of having established, trusting, collaborative relationships which already exist (Dall’Asta et al. 2012) – there is no need to form additional ones in their mind. This predilection toward a homophilic network preference precludes a number of important knowledge transfer activities from occurring in the city. On the other hand, homophilic networks promote stability. Stadfeld and Pentland (2015) found that friendship networks cluster around partnership ties and how this mechanism relates to homophily and homogamy. KW9’s comment about how her network represents a “kind of explicitly geographically rooted community which also exists for fun, for networking, but not in that awful “I don’t know you but I’m going to connect with you kind of way”, but based on relationships that are already there”.

Social media makes visible the once invisible social ties, their strength and heterogenic/homophilic nature. The notion of connections whether friends, followers, vial online networks can sometimes blur between online and offline. One conversation with an interviewee began with a discussion of the “collaborative” working environment. He said that “all collaboration and communication can happen online, or it has a part that occurs online and offline. Online is always there, it’s part of the air’”. He also thought that the term “collaboration” is an over-used buzzword at the moment. On the other hand, he said that it:

*“is good for small, creative businesses. We don’t want to have everything in house as the ‘star chamber of skills you need’ that are brought together for a job and then you disperse when the job is done. I think that Internet has played a huge part in making ‘forming and un-forming’ very much easier. In an old-style ad agency, collaboration was not what creatives did – it was about ring-fencing, because you were terrified of the competitors”.*

He mentioned that another participant of this research (who I later went on to interview) was “keen on media and creating networks of media in Sheffield". He explained that there were groups and clusters within the city who “try to network and get creative juices going, which is not replicated outside of the creative centre”. He said that the “Electric Works is great” for trying to facilitate meetings, share content and that the design of it was good. But that it doesn’t “lend itself to cross-collaboration inside the building, with everyone in their little wings. Sometimes you liaise with people who work in close offices to the shared kitchens… but you’re isolated. The building doesn’t flow or lend itself to sharing ideas”. This statement dispels the mystique surrounding these types of managed workplaces as being facilitators of creative networks. Not only that, but the Electric Works had to fill its empty office spaces with nondigital or creative fields in the end in order to increase occupancy. The digital and creative market in Sheffield appeared to be more sensitive to the high costs of these workspaces following the 2009 global recession. Another participant stated that managed workspaces are “never as good as you think they are going to be in terms of interacting with your peer tenants: you arrive, shut the door and you work. You don’t interact with the other tenants”. In short, he didn’t see “the benefits of the premium that you pay to really meet up well with the costs”.

He said that “it’s important to not only promote yourself, but others in your network with whom you share interests”. He also said that he concentrates his network connections with other “groups of businesses that are like-minded and share the same outlook. Some are competition but we all work together”. This statement demonstrates a preference for homophilic networks. Fenwick (2012) found that the self-employed needed to participate in diverse (heterogeneous) networks to provide more contract and income stability. It also highlights the idea that recognition should be shared across a homophilic network. The meaning is not entirely clear. The impetus to recognize cross-collaborations allow network ties to be elevated and brought to the attention of a larger audience which shares similar views. This collaborative spirit toward shared recognition follows the well-known aphorism that states “a rising tide lifts all boats”.

## Establishing credibility through numbers: followers and friends

The practice of building links, followers and friends online differs slightly from offline networking relationships. Online networks appear more informal because they make visible the number of connections per professional. In practice, a professional may have a small, select group of network contacts who meet on a regular basis as friends. Offline homophilic networks offer the strongest peer-to-peer networks which offer friendship and long-term support (Fenwick 2012). They also function as voice amplifiers as posts are shared by network contacts. The dual effect of voice and visibility, as allowed by an online network, enables the knowledge professional to obtain recognition via these connections.

I asked how much KW11 monitors connections and he said that he doesn’t do this “as much as I should”. He said that his Sheffbiz website (a business news content generated site) had a life of its own and “it’s nice to see where followers are geographically”. (I think the geographic knowledge confirms potential impact). He also noted that it’s impossible to tell whether a follower is a business or an individual, but that “most of them are local”.

One of the participants based out of the Electric Works, KW10, stated that he has around 1300 followers and really pushed to generate more in March 2013. He maintains the account himself and said that he brought about “500 followers during that push and it was about offering value to people”. He said that they increased their followers because 1) his company is a great concept; 2) people enjoy hearing about new ideas; and 3) he tries to convey how product concepts were tested and moulded for the market. KW10’s response conveys a desire to showcase his business as a credible, valuable idea to the wider network with which he communicates.

Fundamentally, KW10 believes that:

*“it is all about engaging people into your business, asking questions, prompting conversation and that has been kind of a big factor on Twitter. I personally have LinkedIn as a business and today I wouldn’t say I’ve had much success from it. It just gives me an online way to find all the people I’ve come across in business and that is why I like it. Just because at times if I have needed a source or something and I didn’t have their business card at hand I can just flip on my iPhone, flip on LinkedIn and get the details I need to contact them”.*

Being self-employed or loosely employed in small companies, knowledge professionals experience unstable jobs and diminished earnings. They also suffer from a lack of sustained organizational contexts in which workers have the opportunity to develop cohesive relationships such as collegial friendships. Income depends on credibility and reputation, in addition to the value of one’s knowledge and skills; again, these are partly dependent on the networks which are established. Knowledge professionals must also demonstrate continuous production of work and the transfer of knowledge which is dependent upon connections with information and opportunity. Secondly, these professionals requite the ability to identify and translate the knowledge across multiple networks simultaneously. This suggests that social media, and the constant transfer of knowledge to an audience remains a critical component of their survival in the labour pool and economic livelihood. Those who develop these communication channels, that are heterogeneous and an extension of their exclusionary homophilic network not only survive but thrive in this new economy.

These networks as aspirational in nature because they are based on showing high numbers of followers who appear to be engaged with the content pumped out on a social media channel (Barley and Kunda 2004). It is also predicated on the perceived value of the contact/connection nodes and how much the individual or entity will potentially promote the content distributed by a professional over social media. It also hinges on the number of followers, key contacts, and “influencers” present in a network even if there is only a loose connection.

## Homophilic network functionality

The following story inspired one participant, and likely others as well, to support a cause. KW3’s company acquired approximately 2000 followers over its first eighteen months. He likes to post content on social media that is “relevant and worth sharing – if we’ve done a piece of work here at the company, I like to share that. And share some of that both with myself and with my clients, to share the benefit, transfer some of the benefit. For example, I’ll share everything and anything – like making a donation to the Volk O’Dwyer fund, in the event he gets extradited to the US – and posted that on both Twitter and Facebook – he’s got 300,000 signatures and support for this”.

KW12 reports that he uses Twitter like a shotgun, in that it will induce a “hit” effect through very deliberate usage. He explained that “you fire a thousand Tweets, unsure of which of your messages is going to be a “hit”, you just know that one of them will find a target audience”. In this instance, is that hit effect a product of social contagion or is it homophilic in nature when it resonated with a key person who passed it to others with whom it resonated? In either case, it produces a social contagion-like effect and emboldens the confidence of the Twitter user when it generates a national or worldwide response through a series of weak ties. The correlative action of that hit remains inconclusive, but that is not the point. The effect is strong enough that it encourages users to continue their content creation in the hope that it will stimulate similar network effects on occasion. Scholars often label this behavioural effect one of “selection versus influence” (Shalizi and Thomas 2011).

Other professionals appear more sceptical of these social contagion effects. KW7, another participant, doesn’t believe affects or influence may be measured on social media in terms of numbers. Tools try to produce a numeric reflection, but that doesn’t consider the qualityof interactions and the quality of the output produced. He finds a lot of the quantifying media analysts’ claims:

“*outrageous because they claim that a tweet has been seen by this many people and all they really do is add up the numbers of people who have seen it and retweet it. In reality, the number of people who have seen it will be a small percentage of that and the number who have taken action will be even smaller. At the end of the day influence works the same as it does off line – in the power of persuasion, the power to help others and people taking action as a result of it. You can theoretically measure the number of people who have seen something, but you can’t measure that they have taken any action or not”.*

KW7 also believes in the “power” of media to tell a story – what he would see as quality output because it serves to inspire people beyond the facts and figures. He gives the example of a video he shot of a fourteen-year-old girl telling the story of her friend’s cystic fibrosis and using that to get people to sign up to the organ donor register and how many people need a transplant. He describes it as “something in real life that people can relate to and it’s more powerful than the facts and figures about how many people are on the donor list”.

## Engaging with customers and clients: Voice and visibility

The way knowledge professionals engage with their customers, clients and social media network audiences determines the degree to which others are aware of their work. KW1 pointed out some public servants who used social media well. He used the example of Tom Riordan (the Chief Executive of Leeds at the time) as someone who really uses Twitter well, and says that it makes him (appear) accessible by commenting on things he’s doing for the city, and he’ll also use social media to openly ask people what it is that they want. He thinks that social media profiles of people in the public sector “need to be strategically managed”, and that they must “also manage who you connect to, and also manage what you say”.

Interactivity as defined by Cabbidu et al (2014) includes creating media-rich content (for example, with a Google Street View of the Sheffield Public Library in the city centre or posting old photographs taken off Sheffield neighbourhoods over the past 100 years on Flickr). While simultaneously promoting this content on Facebook to people who “like” or “follow” Sheffield’s library system. Knowledge professionals like, and feel comfortable with, forms of persistent engagement. However, as KW1 said, “it feels like talking to a black hole sometimes”.

“Humanity infused with personality” constitutes key engagement ingredients recognized by the Sheffield knowledge professional community as important to persistent engagement as described by KW13. KW1 also clearly delineated between social media venues for communicative types, as Twitter was seen as a place “to rant, a lobbying tool and as a corporate marketing machine. It can be a call to arms by attracting people’s attention”.

In terms of data generation, KW1 reported using Flipboard and a bit of analytics on his website to tailor his Internet information and social media usage. But he finds that the “analytics are not so useful”. He feels that LinkedIn’s free membership offers as much as the paid membership: “it doesn’t provide much value. But I like to see who is looking at me” KW7 values clout and “has a policy of not connecting with unknown people that are high up in an organisation”. In the past, he has occasionally linked with high-level people in other organizational or government departments, which provides visibility for his company and also raises awareness that he is active: “it’s about creating serendipitous opportunities”.

KW1’s reporting of his use reflects a customized engagement method in which interactions with customers are based on prior knowledge of an individual’s information. Sometimes personal profiles, connections, preferences, and other visible digital footprints provide information to a company which enables the channel to be customized. Cabbidu et al. (2014) found that customized social media messages have mixed effects on customer engagement. This method appears best when a knowledge professional works in a very niche field such as a software company. This software company has a lot of followers, but not a lot of engagement via Twitter. People will not have a conversation online with them or about their products out in the open. A lot of people get in touch if they update a product, need information about new training, new product launch or about the latest blog entries. The company’s followers now include people or companies who have gotten help through the Twitter feed or Facebook. Facebook doesn’t offer a lot of value because people who buy their products won’t be looking on Facebook. They will be looking for them on LinkedIn or on Twitter. On Facebook they will get a question about a product or a wall post about once a week. They find out more about what other media companies and competitors are getting up to from their Facebook feed: “You find out a lot of what’s going on in the business media-wise sometimes because it will be shared by staff with their friends”. A high level of customization by monitoring the personal information posted by social media members and may help to obtain an in-depth understanding of customer needs (Sigala, 2003). Customers are more satisfied when an organization targets its social media messages through good recommendations and relevant content (Liang, Lai, & Ku, 2007).

KW2 believes that it is “important to interact directly with customers, clients, and businesses to end users, particularly what customers think of the company. If my company responds directly to issues, it helps inform the public”. KW2’s stance reflects a customized method for a civic organization which receives public support; he therefore says that “people in Sheffield feel that they have a say in where it is and why it’s here – they can be more vocal than in private industry. People feel like they have the right to complain vigorously and loudly about prices and location of services”.

KW2 talked about how Digital Region’s social media usage is aimed at decision makers in business and end user organisations (broadband providers). They analyse how the end user is thinking about the company based on Twitter reactions, shares and followers, which helps inform strategy because “Twitter is exceptionally reactive and has an incredible response time where you get different slants, examples of breaking news and events. It’s great to consume this kind of information and it’s customisable”. KW2 likes to follow rugby, food and real ale reviewers in order to find experts on these topics. He called Twitter “really quite nichey” and a place where “you have the same sort of thoughts as the people you follow”.

The personae people use on social media also reflect a tendency to try to “keep it light”. While there is a professional element to her Twitter accounts, KW9 explained that:

*“it’s very carefully done so if I want to talk to someone in my network about my professional work, I tend to phrase it very casually, like ‘hey, we should have a chat about…?’ I am very aware that I treat my network in a way that aligns with the informal, kind of bouncy, very chatty and sharing information about the things I like and do in Sheffield”.*

In this way, she acts as an ambassador of the organization she works for, and for the city by promoting its #shops, #films, #festivals and #restaurants online that she enjoys. It also represents an intentional web presence.

## Status, hierarchies and the news

On social media, sometimes status is conveyed in numbers of followers, since that is an indicator of the potential attention and/or recognition one may accrue in the public sphere. A larger network increases the odd for recognition. In order to garner more attention, along with the appearance of status and influence, a Sheffield ICT company paid for some of its Twitter followers (20,000 followers or more) when it began to use this social medium. Once its reputation and credibility took hold, KW9 described culling the non-legitimate followers from its list. Globally, and in the UK, some companies exist to find individuals or other companies’ Twitter followers. Many Twitter accounts set up an “auto-follow” function that is triggered automatically when someone connects to a specific account. KW9 stated that “a certain percentage of connections follow us back. It has worked to a point. But people were weeded out because they will never buy software or come to the webinar trainings we offer”. KW9 developed a targeted follow list for Twitter with input from her finance and marketing teams, with additional feedback from a third-party company. This included a concentrated effort to find followers among groups and/or individuals who appear influential in industry or who bring up topics regarding issues the company wants to get involved with in the future. They have targeted a host of followers based on these recommendations, and they were refollowed back. They also follow ICT media analysts to monitor their content – do they discuss this Sheffield company and in what context? Should the company engage with these pundits sometime in the future regarding product releases or upgrades?

KW9 also mentioned that social media hierarchies are somewhat driven by different characteristics:

*“I make judgments based on how many people they follow, and how many people follow them… if they only follow 20 people, and they are followed by 100,000 people, then they probably don’t want to be personally contacted, but that is a personal judgment. My feeling is that by being on Twitter, and in a social medium like that, there is an \*implicit permission\* to engage with them directly”.*

This view appears valid when a Twitter connection “follows” an individual, it permits further contact.

KW9 similarly believes that people who are higher up tend to have “gatekeepers that stop people lower down getting access to them and one of the things that is interesting about social media (Twitter), which has a very open structure in terms of who can connect with whom – it breaks that down entirely”. She elaborated further:

*“The potential exists for me to tweet at Bill Gates, and for him to find it interesting and tweet back, or whoever. What then comes into play that accessibility is not the same as visibility, so if there are 100,000 people tweeting at Bill Gates, he is highly unlikely to have the energy or desire to read and respond to me. Will he specifically pick me out and engage with me? It’s not that there is a hierarchical boundary to me being able to engage, it’s a kind of social, numbers (scalar) game in terms of that, but I do think it has the potential to reduce hierarchies. One of the ways it does that is giving people the opportunity to appear more ‘public’ and ‘human’, so you have these technologies that not only allow me to talk to Bill Gates, but Bill Gates can talk to the world, himself, with spelling mistakes and inappropriate capitalization, to give you a sense that there is a human being as well as being this corporate head or this person that heads up this amazing foundation, or the devil incarnate! There is something about access to people’s kind of humanness that serves to reduce hierarchies”.*

KW6 offered an alternative view, remarking that:

*“it is a very hard skill to put personality on social media because you are talking through a business interface, if you like. On a personal profile, it is a lot easier. But when you are using business as an interface it is very difficult where in real life you can have conversations with people, share your personality, and share your values and opinions. I am always quite wary as to what you put on-line as well because people can make judgments whereas if you are there they can see what you are like and understand your opinions and values”.*

KW4 told me that in the past couple of years he has seen an emergence of civil servants and journalists using Twitter to try to convey a voice and appear to be more accessible to the public. He described a “crossover between what I used to tweet and open data in that people I actually interact with on Twitter tend to be a small group of 10-12 which is essentially an open data user group”. As a result, he uses Twitter as a “platform for influence – it’s those people (the group) that he tries to influence”. Because KW4 resides far from many of these people, he uses Twitter as a channel for contact in place of the face-to-face channel he might have had before leaving London for the countryside.

Traditional media hierarchies appear to exist when the news is tied to a financial decision. When I to discuss my research with a local ICT company, it had announced through the wire that it had acquired a new chief office on that day. The news “went straight to the city before it reached the staff; nowhere internally was it shared”. This ICT company does not regard Facebook as a good outlet for its strategic communications, their employees use it a lot and it was touted as providing “a good social side to the business and lots of people are friends with each other. It keeps all of the employees together”. The process of communication in the company was explained to me in the following way: 1) news is released by the company via traditional media using the market wire; 2) it is tweeted, and then retweeted by others which increases its reach quite a bit (50 recognitions among those with higher status) usually occurs from a big press release; and 3) it is discussed by employees on Facebook.

## On hiring and work

The ICT company in Sheffield drew many of their original employees from other companies that have now ceased operations. LinkedIn provides a steady stream of information about potential employees located in Sheffield that did not work for previous local companies. As one hiring manager stated, “Thank God for LinkedIn. If it wasn’t for LinkedIn, we wouldn’t have been able to tap people up when we are looking to hire”. This company begins by looking at their current employee’s network of “contacts – particularly those that our employees say are good”. This recruitment method reinforces linkages and taps into contacts. Who and what you know have equal merit in whether you are approached for a new position. Without network contacts, however, it is likely a person would be passed up in favour of others. Both strong and weak ties may be used strategically for a specific purpose, meaning that emergent ties occur when new contacts are made through ancillary networks when referrals are made (Quinton and Wilson 2016).

Since the majority of workers are connected via social media with their co-workers (Duggan et al. 2015; Weidner et al. 2012; Schmidt et al. 2016), it is important to understand the implications of these connections. I asked a creative design professional, Susan, about how her social media connections influence her work. She responded that they “allow them to find out what others are doing – what kinds of projects they are working on and with whom and within the wider design world both nationally and locally – Twitter is handy for keeping up with design trends, colours, fonts, imagery”. She also mentioned that “there is a lot of Sheffield-based photography going on so it is nice to keep an eye out for their work and what they are doing so where our clients might benefit from photography in a project, like a brochure or something like that”.

KW11 told me that “men used to work at the steelworks and you knew everybody in your network were real – you had grown up together with the foreman and he might know your son and grandfather. There was a sort of status that makes you feel good about yourself. And that is where the confidence would come from.” Today, however, he believes that “social networks are more invisible – despite being more visible in one sense – the hierarchies are harder to link up because you knew that if there were a foreman over there, you would know the team over there in the physical sense”. He also said, “you have someone on LinkedIn, they might have a secondary friend on LinkedIn and another friend on Facebook that knew someone that they followed on Twitter”. The complexity of that statement points out how the reality of our networks is obscure and organic – there are no straight lines anymore.

Someone within a network must also serve as an “arranger” to prompt relationships in the working environment, in order to “create momentum to it”. Steve, a knowledge worker based at the Workstation, described holding an event every six months with contacts, where they just talk about what they do and get a sense of what their contact may need or how they may benefit from their services. He was clear that “it’s not a sales pitch, rather it builds on past relationships that I want to create”. He spoke to another designer in the building about apprenticeships earlier and he knows someone who wants to get into design, so he gave the designer the contact details of this person and his card. This allows him to continue to connect with his bridging ties and maintain some social visibility

Knowledge professionals prefer to engage within a homophilic and aspirational network atmosphere. From their point of view, it is strategically important to engage with and capture the attention of a central network node (also known as an influencer). This is important to the establishment of an audience. The network becomes the audience. This group’s networking and engagement is characterized by:

* The appearance of social accessibility
* A visible and validated presence
* Awareness of other’s activities through monitoring
* Development and establishment of a persona
* Status/social hierarchy and stratification between each other
* Some labour stability predicated on established bridging connections

All of these activities are predicated on achieving recognition professionally to establish reputation and competency. It begins with presence, both in person and spreads to a cultivated persona that aims to be as representational to the professionals’ idealized likeness as possible.

## Sociability, representation and identity

Knowledge professionals hold a communicative persona and sociality on social media in high regard. Sociality in this regard combines the notions of sentiment and persona. This breaks down to the conversations that people are having, topic of expression, and style of expression. The role of sentiment is to act much like an emotional contagion through a network. It can be either positive or negative, based on content and the speed with which it spreads.

KW9 really loves Sheffield and seeks to promote it – locally, nationally and globally. She expanded on this:

*“one of the elements I’ve created around myself and Sheffield is my ‘sense of Sheffield’. So, Sheffield is the place that I want to be, and enjoy being. If I look back over my tweets, I know I post things like ‘Oh, my god, I fucking love Sheffield today’. And I sometimes use the hashtag #Sheffield”.*

She characterizes her promotion of it as a “self-referential representation of the way that people feel about living in Sheffield”. Her media presence led to her to tweeting a lot of things about the TedX event and that became, for her a kind of pivotal event in the sense of ”I love being in Sheffield and part of the way I participate in the public life in Sheffield”. KW9’s interactivity tries to generate positivity toward the Sheffield sense of place and self. By engaging in this promotion of the city, KW9 is trying to generate an emotional contagion that is relatable to other residents in Sheffield and former residents in the UK.

KW9 expressed her view that Sheffield does not “shout about itself enough on social media”. Instead, she finds out what’s going on in the city at the pub. She said that “if it was being talked about, I would know, and it’s not”. She believes that:

*“local government, including the City Council and City Hall should be giving information about Sheffield this way – it could be doing a lot better. And it’s crazy that they’re not using it. People aren’t going to search out what the council is doing. If they do hear about it currently, it’s bad news. If councils and cities want people to think positively about a place, they need to be giving them the information rather than making them look for it. They need to highlight the positive aspects of what they’re doing. Meanwhile, face up to the negative. Feed information to people. The best thing a city can do is fess up to their mistakes and be honest about it. Show people that they’re doing their best. Right now leadership is faceless to most – it’s an impersonal entity. Social media allows you to be a person and represent your interests a lot better with inbuilt decency filters. Presenting yourself as a person is the best thing you can do to get people engaged”.*

KW9’s statement reflects a number of issues: 1) the City Council and City Hall cannot easily present itself as completely accessible; 2) are the residents of Sheffield really titillated by the news from City Hall? and 3) is the government in the business of releasing news via only one communication channel? However, KW9’s point about the city making more of an effort to use this new channel as an additional form of communication is valid. Stieglitz and Lang-Duan (2013) report that sentiment such as #bedroomtax might have viral effects in social media because it can stir emotions among social media users and allow content to spread. This type of emotional content is more likely to be shared.

## Types of conversations

Many of the research participants who used social media held multiple accounts. KW11, for example has one for business as well as a separate personal account that highlights his amateur photography. He has plans to merge these two accounts as it will give some humanity and personality to his purely business account: “showing some humanity and personality always helps”. He said that he also uses Twitter as a “way to rant, a lobbying tool and as a corporate marketing machine. It can be a call to arms by attracting people’s attention”.

He viewed Twitter as a place for casual relationships and finds it “extraordinary that some people use Twitter to set up meetings - I don’t think I’d ever do that”. He also said that “the whole point of social media is to use it as a mirror to reflect your values and aims. Conversations begin on social media and I’ll join in to play a part of it”. The conversations that play out on social media appear to revel in their informality. Thus, Twitter becomes a space where ideas and people may have “discussions” or banter, away from an “establishment”, one sanctioned by its own rules. Responding directly to @user via a #hashtag contributes to the formation of relational structures of social capital (Rehm and Notten 2016).

KW2, another user, commented on the balance his one Twitter account seeks to convey between his personal and professional lives. He tweets about “being out with mates, or about interesting articles”. For him, “it’s a balance, how to interact with people both professionally and personally”. Batenburg and Bartels (2017) discovered that audiences preferred social media accounts which integrated personal and professional contacts. This yielded high levels of likeability when analysing self-enhancing messages versus self-verifying messages. The best strategy, according to Batenburg and Bartels (2017) to get results in terms of respect from others and likeability among colleagues is to integrate your personal and professional self on Facebook with self-enhancing posts. They call this “content behaviour”.

KW2 seemed to excel at this mix of the professional and personal post or Tweet. He spoke to me about his viewing of the 2012 Olympic Opening Ceremony. He saw something and, reacted with: “What the bloody hell!” This was replicated by the tweets he read a few seconds later by others who retweeted the message “what the bloody hell?!?” He said this circulation was “kind of familial – hugely community-based and biased. It makes you feel more empathy towards the people you follow and how they feel about you as well”.

**Conclusions**

Knowledge workers arguably retain the most influence and sway in matters of economic importance at the local level. During the interview process, after I explained the project to someone I had recently met. KL9 told me that professionals constituted the most interesting category because understanding them is the key to unlocking the Sheffield’s potential as a digital hub. This sentiment already carries significant weight with the City of Sheffield as their infrastructure investments have benefited this group the most. However, I would also argue that many of the knowledge workers in Sheffield exist within a precarious employment situation. Most spoke about how difficult it was to find permanent employment and how, in many cases, they had to carve it out for themselves and be their own boss by stringing together a host of temporary contracts together to form one, stable job for themselves. The constant drive to generate content is mirrored on their websites and social media platforms. They serve as a showcase for their talents, networks, and responsibilities. Their social media profiles highlight the persona and curated presence that is broadcast out to second, or even, third connections. Social media presence just serves to complement their professional lives.

The knowledge professionals concern themselves with the proliferation of their presence through the performance of visibility and voice. This involves being an active participant on social media sites, connecting with other professionals online, and establishing a transactional relationship with this network that has been cultivated. The need for validation comes from the flow of work through their local and regionally based networks, not necessarily from validation online in the form of elevating their content via tweets or posts on LinkedIn. The resources generated by having a presence on social media platforms allows the knowledge workers to manage their reputations in the job market and digital economy constantly. They scope out competitors this way, and it also encourages them to maintain strong connections within their local network. The unbridled access requires a self-sustaining effort beyond the usual post – the knowledge workers feel pressure to promote their work to the wider employment sphere. Thus, this creates a desire to actively engage with and listen to others. Social capital intersects through the presence and the structure of their networks to positively affect their ability to gain and retain meaningful employment. This calls for a specific level of pervasive awareness of their industry, what their peers do and how their specific skill set fits into the digital economy framework.

The knowledge professionals are determined extend their local, national and global reach as much as possible. However, local and national reach appears to be the most important to their employment success. This cohort rates strongly in networking and engagement with pervasive awareness is beginning to emerge as an important factor in their networking behaviour. This cohort does not face such an uncertain future; however, the proliferation of short term, temporary, and self-employment contracts confines their continued employment status in a frequently precarious situation. Only a few of the knowledge professionals had secured long-term employment. Their job prospects rely on media ubiquity and the concentration of homophilic networks branching out through the City and throughout the neighbouring Counties. As it stood at the time of the interviews, very few permanent jobs existed for this group; hence many relied on self-employment to maintain status in the workforce. The self-employment was also predicated on the strength of their networks, value of work and reputation.

This score reflects the fact that knowledge workers have few access concerns, strong networking capital and emerging pervasive awareness of the circulation of work locally. This group relies on having strong sociability among all network ties and the ability to forge them together to produce further work opportunities.

Figure 10: Knowledge Workers’ Spectrum

Their ability to represent themselves and the Sheffield community also figures prominently in this spectra grade. Professionals have a strong sense of the community from which they come from and do their utmost to showcase a recognized Sheffield image along with their own creative content. This co-portrayal allows them to forge a presence that is both validated by their own network, but also has the potential to be recognized by others nationally. The presence is built on content and recognition by others. It is also contingent upon the merging of both their voice, and being visible locally. It is virtually impossible to launch, and be validated nationally or globally without some semblance of a strong locally-based, homophilic network unless the knowledge worker verges on the category of “expert” for his/her field. Most importantly, professionals benefit from a strong sense that they can be themselves in the public arena that is social media. They do not have to necessarily conform the unwritten rules of governing their appearance like the elites.

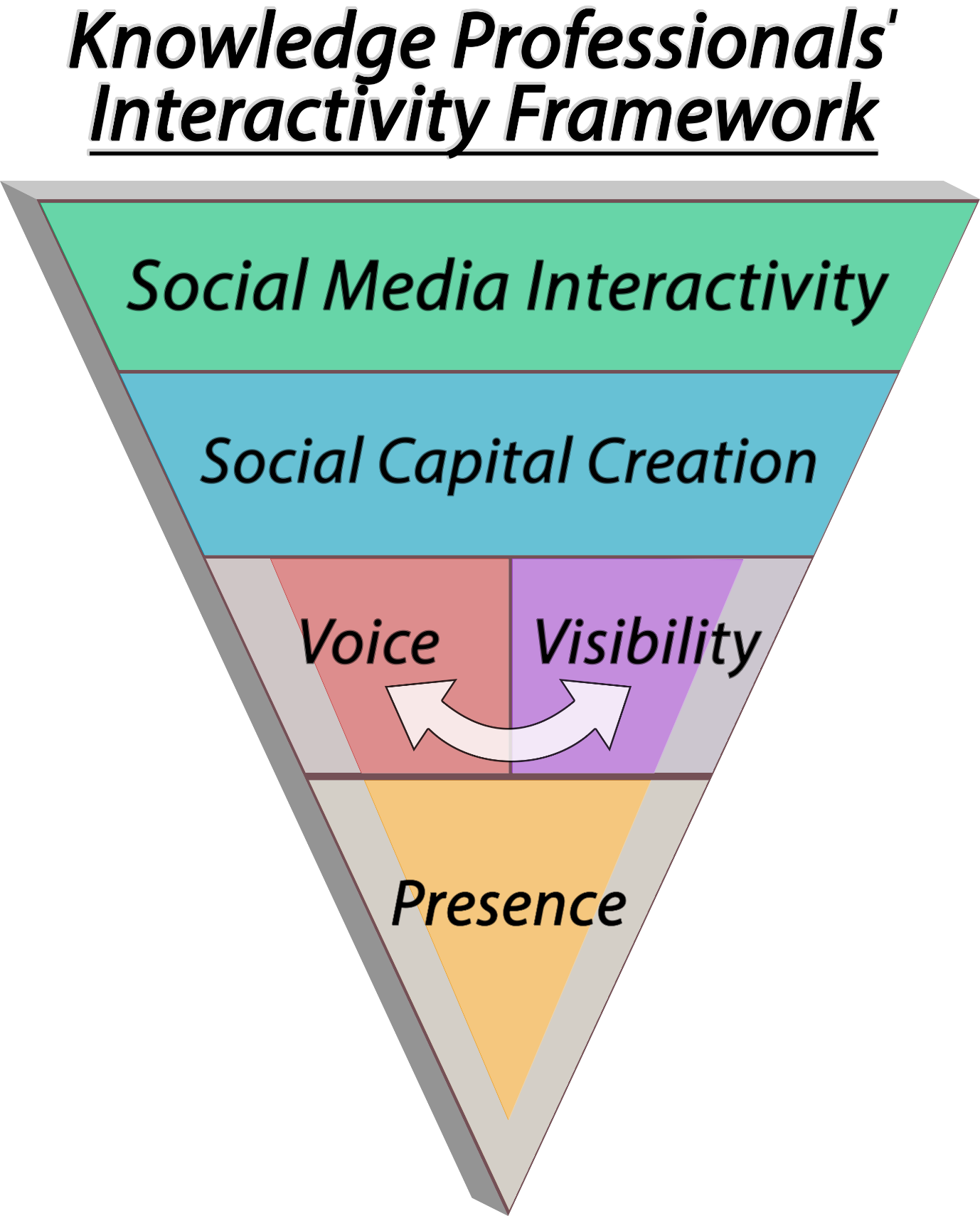
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Figure 11: Knowledge Professionals’ Interactivity Framework

In terms of their presence, knowledge professionals demonstrate the full among of social media interactivity and the resulting capital creation that is possible to generate in the path toward presence. Professionals desire influence and a sense of presence – it validates their place in society and lets them know that their work matters to some extent. On the other hand, their ability to achieve voice and visibility are restricted because their networks are homophilic in nature. If their networks were more diverse in terms of social class, full range of occupations represented, national or global locations, a variety of age groups and included people of influence as well as those who had little sway, they would achieve more presence. It requires a less occupational hidebound online existence to break through barriers associated with voice and visibility. Representation and identity figure prominently in how an individual conveys voice and visibility. The professionals understand their position in society, but do not always link their location with who they are, or who they want to be. The professionals who are able to do this best, such as linking their professional identity with where they buy coffee, or what new or established restaurant is great in Sheffield, not only compounds their presence online, it serves to amplify the voice and visibility of place and the individual using social media. In short, place and person become co-creators of presence through Identity and Representation. Not all of the professionals use this strategy, however for those who do, it is very successful.

The bell curve for knowledge professionals, Figure 12, shows how well they are connected and engaged. In general professionals skills span from those who are connected and engaged to some extent, to those who seek to become insightful users. Figure 12 also depicts where the knowledge professionals reside in terms of levels. In order to achieve a high level of insight, professionals would need to be highly aware of how they are perceived by others – a form of pervasive awareness. They easily fall in the fourth level of the divide which indicates they are aware of how they are perceived by other’s who exist in close proximity, such as a valued colleague. However, they are not frequently aware (or even care to be aware) of how other’s may perceive them.

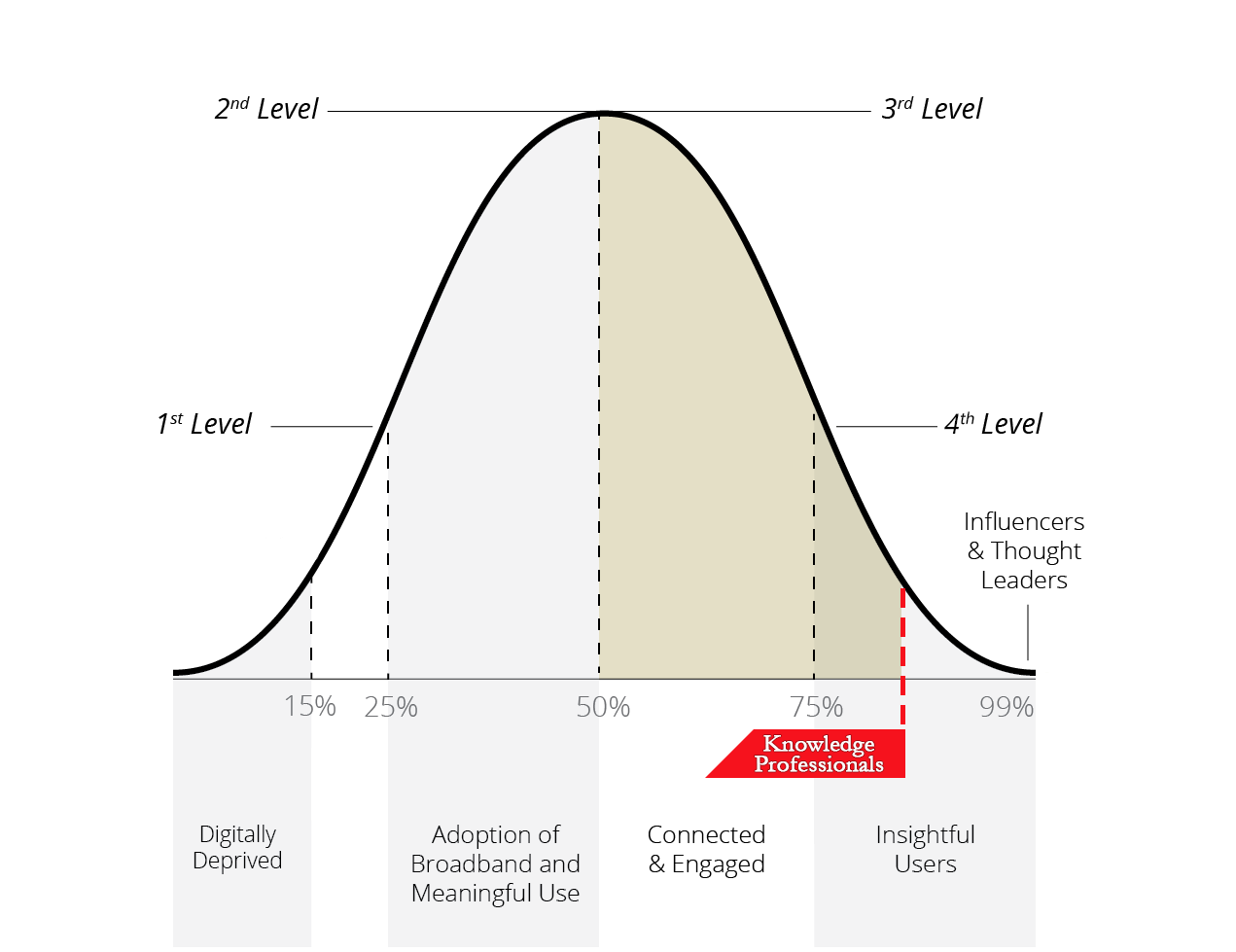


Figure 12: Knowledge Professionals’ position on the bell curve representing the levels of the digital divide

All of the professionals represented the Connected & Engaged through to the Insightful Users. None of the professionals rise to the level of Influencers and Thought Leaders because their networks of connections were primarily based in Sheffield, South Yorkshire, Manchester or Derbyshire. In addition, the subject matter that they tweeted about showed that topics were generated from local news or events and did not reflect national interests unless a tweet pertained to a specific issue such as fairness in treatment of people with autism. Generally, as was stated in Chapter 2, the third level theory combines several literatures investigating the diffusion of innovations, the uses and gratifications of media, and the knowledge gap and usage gap theories. In other words,

the third level begins with empowerment and requires the individual to be connected and engaged. The uses and gratification may be applied in conjunction with the professional’s bell curve because it hinges on how audiences use media through a complex set of social and psychological motives. The empowerment comes as a result of an engaged and networked audience that reinforce each other.

CHAPTER 7: ELITES’ INTERACTIVITY

This Chapter delves into the forms of digital interactivity important to the elites who participated in this research. Their interests may be best described as interested in further developing and cultivating the public sphere. The elites interviewed for this research have voices which are highly valued. In addition, they each strive to foster the cyclical communicative process as described by Tacchi (2011) where recognition and respect are sought on various social media channels.

The table below provides an overview of the elites who participated in this research. The elites who participated in this research serve different functions, or are representative of various occupations, in society. However, they are grouped under the umbrella term, ‘elite’, because they occupy a privileged position in society. They represent leaders who are involved with national and/or international-level decision-making. Their names have been suppressed, however, throughout the texts the elites will be referred to by their moniker. In addition, I reveal their genders and what position they have in society – in other words, what makes them “elite”.

|  |  |  |
| --- | --- | --- |
| **Elites’ Moniker** | **Gender** | **Position in society** |
| EL1 | M | Member of Parliament |
| EL2 | F | Member of Parliament |
| EL3 | M | Member of Parliament |
| EL4 | M | Industry Executive |
| El5 | M | Senior Civil Servant |
| El6 | F | Chief Executive |
| EL7 | M | Chief Executive |

All of the elites interviewed for this research had adopted social media. Of note, however, is the how elites convey and foster their reputation as a trusted source of information. They seek to impart the know-how to accomplish change, and sometimes inspire others to successful ventures as well to an audience. Recognition for the elites is multi-faceted and will be explored in the following section.

## Data and Tech Linkages: the vision of fostering a positive transactional environment

The elites are not concerned about having access to technology or the creation of content. Rather, this group is concerned with cultivating their presence on social media and having access to the tools to achieve this. Infrastructure for this group, therefore, consists of being part networks that help them to define the organizational boundaries necessary to reach the public. This may include everything from specific audience networks, well-known informational sources (thought leaders), public relations, or even tech experts. Elites care about the overall, intra-organizational field where their social media visibly connects with larger institutions such as political party organizations (Reese and Shoemaker 2016). For example, if one looks at Grant Schapps’s Twitter account, his followers are visible to the public and this adds to the presence he seeks to convey as well. In short, this is one of the ways he seeks to be recognized for his identity as a Conservative MP and politician.

While there is no consensus among the different parties interviewed, the elites appear to strive towards a mutually respectful communication exchange on social media. For several of the elites, their social media channels are managed by a public relations specialist. One MP attended a workshop to improve his/her social media skills as it was offered to all parliamentary members. The MP commented that the training “*was good in the sense of technically the content was good: it does come back to the question I pose is there isn’t a single model that works for every constituency therefore here are a set of tools. How you apply them to your constituency will be slightly different from the person next door. You can improve people’s awareness of the power of some tools and if you do a sort of random scan of people you find there are a very significant number of people who use no social media and then there is another group that are probably equally ineffective because they overcook the pudding. But the interesting thing is you have a generation of people coming into the voting system who know nothing but social media and that is going to be another step change…But I am pretty confident in saying that by the next election it will only be a minority of candidates, let alone elected people, who start the process without a significant social media presence. They would be monks not to do it because let’s say across your constituency there are three to five hundred activists, if they can only, through their party connections, help you build up a following of five each you are starting to build quite a significant presence that is already bigger than any of the majorities it would take to swing this coalition out and Labour back in.”*

Clearly, social media has emerged as an important political tool seen as necessary to win an election. Indeed, an MP’s presence on social media needs to combine both visibility and voice in order to achieve recognition, particularly among the young. However, data transactions also play a significant role in what elites think about on the macro-level. One of the elite participants, who served on several Parliamentary committees, described the ideal systems architecture design necessary for successful e-government. “*I think government would find itself able to move much faster and have a more adaptive system if they created common frontends across their systems, across their departments, including between central and local government and the devolved assemblies as well. If all of that bit was got right and the business process were then fitted into a common pattern - all the complexities that limit simple communication, and social media is by and large simple communication, are lost because you have to start off filling in three pages with your name, address, national insurance and on. If that was based upon a simple transactional code system where that code opened the data set for you and like all transactions you have some means of expressing trust between the two parties.”*

EL5 is describing how platform architecture should work where the data is linked and shared between departments rather than siloed as described by one of the MPs interviewed for this project. The platform architecture and algorithms would need to be designed with utmost care. The role of physical architecture is key (Bathelt and Glucker 2005) to a range of interactivity that people rely on such as networking, collaborating, and sharing all of which may occur on a departmental site.

The creation of an inclusive, linear, transactional organizational environment became a preoccupation among two of the elites. These ideas are predicated, however, on the notion that residents have access to the Internet, are social media users and comfortable with using e-government services. Leeds City Council’s main concern is moving toward of “sociable”, transactional based organization predicated on efficient and human customer-like experiences.

The human aspect of the e-government service is stressed because it is out of the desire to achieve the social media friendly mark initiative launched the Local Government Association in October 2012. Some councils saw this as a gimmick, while others embraced it. This movement toward a sociable organization strived to not just tick the social media friendly box, but be more inclusive and “social” in all ways. Leeds has named this effort #TrulySocial on Twitter. Leeds City Council has a blog which captured what the social media friendly mark means for the Council’s relationships with its residents. The social media friendly mark, pursued by Leeds City Council, seeks to make the organizational dynamics between individuals and local government entities not only strong, but almost convivial. It is another form of recognition as define by Fincher and Iveson (2008).

City councils are beginning to grapple with communicating to larger audiences, not just their residents, through identifiable, yet controlled social network channels. This shifting agency, however, underscores the tension between an individual employee’s opinion and their employer’s image and reputation. This cross-section of competing voices and visibility intersect, and sometimes conflict. On the one hand, companies desire personable, authentic and human employees, but also remain scared about what they could say if given the outlet and reach. This creates tension between who can speak, or represent an organizational entity, what can be said and how to express it. It is easy for an employee or outside individual to tarnish the reputation of a large corporate or governmental entity on social media with a casual post or review online.

In an attempt to resolve social media tensions, many local government entities and corporations have written social media policies that guide employee and residential behaviour in networked spaces. Adoption of these policies may be regarded as sensible, more inclusive, transparent and help avert disasters. On the other hand, these policies unwittingly construct what Herndl and Licona (2007) call a “constrained agency.” This is defined as a situational form of agency which “emerges at the intersection of agentive opportunities and the regulatory power of authority” (2007:133). They also call for a “more careful understanding of the interaction between agency and those regulative forces that stabilize institutions and practices.” The sociable organization idea, while progressive and with the best intentions, needs to be implemented and practiced before a verdict may be made.

An elite remarked on how some locations are looking at the idea of *“shared influence”* throughthe creation of social media friendly city mark. I question the viability of this pursuit given the strategic nature of many of its users. Those that do not have the confidence, or the bridging social capital, would not be able to participate in this level of influence. Indeed, the notion of shared influence effectively considers all citizens have presence of equal value. Perhaps the struggle for recognition is both a human need as it affirms human identity. Equal value also implies no conflict, but societal recognition, and on what grounds, lacks transactional mutuality. This gives the impression that the attempt to streamline services can also be developed in tandem with media usage and e-government roll outs.

Like knowledge workers, elites have used Hootsuite to manage the time release of their social media messages. However, of the three who reported using it at one time, they quickly became bored of it. One elite, who I will refer to as EL6, wanted to eventually use analytics for her media accounts but relies on her memory and general observations to get a sense of how her tweets circulate. She said, *“I never use my phone or my IPad, and I look at those people with those things and say that they have had XYZ retweets, and I think, stop cluttering up my Twitter time. But I always connect with others, not just based on my interactions. I look at who is following me, who retweets my posts or mentions me, but I only view it through my own timeline rather than using any analysis.”* In general, some of the elites have stayed away from Twitter. She said that there is pressure to be there as a public persona because “*increasingly more and more residents are using it, particularly younger people. So it is actually creating that direct connection there which I would have expected more from the Facebook-type identity. But you know I use Facebook, for me Facebook is my personal space, but where I like thing – I am connected to like my local council page – but I don’t know if I’d like my councillor or chief executive on there. I like businesses, I like my play group and my restaurants, my park and my kid’s football club. I think, it is the right space to be in for me as an individual person.”* Xu and Feng (2014) acknowledge the role that a gatekeeper may have on a social network. For EL6, removing her public self from social media’s public sphere and existing on Twitter only, she is allowing others to consciously choose her content feed.

Another elite, an MP whom I will call EL3**,** uses his analytics for social media and website usage. He observed that “*some very curious figures emerge. First of all, there are ebbs and flows of people in the system with no constant at all. It is obviously driven by topic, by people who want to contact him, by people who want to use him as a route into other things in the area, either geographically or areas of interest, and that will continue.*” EL3 was also concerned with the future engagement by citizens with the government and he thinks that “*it will be a long time I think before there will be a reverse upstream move in terms of government services. Yes, there is a massive move towards digital by default, as you know, but, my guess is, whilst there will be a top-down ability for you to access through electronic means, feeding up will only happen through web-enabled systems. And only then if some of the departments get their act together and create some basic standards that are consistent across government departments. Social media will come some years behind that – I think it will happen, but much more slowly.”* In his view, an efficient and inclusive organization, as pursued by Leeds, is many years from fruition. Several authors discussed in the literature review (Lovari and Parisi, 2015; Schweidel and Moe, 2014) mention the difficulties associated with “listening” in the public realm and how government does not make an effort in this regard.

As many of the public officials maintain their social media themselves or through a public relations expert constitutes a political action which defies the skills acquired thus far as a politician. Social media “listening” to an audience is on a grand scale. Schweitzer (2014) demonstrated how an entire public transport organization addressed the issue; however, it represents a complex issue for a sole entity. Further, how elites achieve individual or community validation, public recognition, and narrative exchange presents a transient goal, perhaps one contingent on the acceptance and the establishment of trust.

EL3 also argued that social media adoption would occur at a much slower rate and present a more difficult transition than Internet adoption. He thought that a communicative shift would have to take place as discussion “is more suited to something more expansive than 140 characters - normally. There will be exceptions, but most times one communicates with the government, on any level, they want a lot more information, so a minimum tool could be a secure email route, for example.”

How social media communications will evolve and be incorporated into e-government practices and pursued by elites is anyone’s guess. It is clear that elites are thinking through the complex problems as they present themselves. However, as they do not drive content like the knowledge workers, the main premise eludes them. It exists as an outlet for the public presence, a networking tool and a rudimentary analytical tool by which to gauge outreach. EL3 reflected on what it means to be an effective communicator to his constituents and that a constantly changing strategy has “*got to be the trick to success, especially in politics where your constituency is so varied. I have five ward units of electoral representation, where two are in the bottom quintile of economic activity, and I’ve got two wards in the top. So you see, it is a very disparate community, beautiful countryside through to heavy industry, jobs ranging from high skill academic and scientific jobs through to lots of very basic, manual jobs. To get a message that is coherent to such a wide group is actually quite hard. It is hard enough anyway, but to do it in a public conversation is even harder*.” This quote presents the difficulty a politician faces representing people with different identities seeking affirmation, and recognition first with EL3, and by extension Central Government.

For EL3 and the other elites, social media presents a difficult juxtaposition of environments where you have a public forum from which to engage “conversation”. The term “conversation” implies small group one-on-one discussion; however, social media is inherently about trying to increase reach and scale, and balancing that with authenticity. Nobody is standing around saying “hang on there a minute” on social media to disrupt the flow and pause for reflection. This would constitute a third party listening, not just qualitative analytics distilled into data, and can not only disrupt the rapport taking place between two people, but also constitutes a negative form of reciprocity.

## Networking and Engagement: reaching out and gaining #recognition

This dovetails into a discussion about how elites tailor their messages depending on their networked audience on social media. EL3 provided some insightful quotes about how the media helps him to be an effective politician. He argued that *“the most powerful tool an MP has at their disposal is their ability to knock on somebody’s door and talk one-to-one.”* EL3 feels that connecting with residents in person allows the individual he is engaged with to be allows synchronous listening to occur where recognition is instant (Couldry 2010) and social cues may be observed (Bacev-Giles and Haji 2017). It also enables the elite to easily gauge other people’s concerns by talking one-to-one and filter through the emotion and sentiment which is conveyed during a discussion. Elites state that trying to distil the usual social cues and demographic status from a curated profile is impossible for them. From a community/neighbourhood/individual point of view, however, being listened to by an elite affirms their longing for justice and sense of humanity. Listening enables the action of being heard – an individual and/or group then feel listened to and the politician finds out about the broader community issues, which may or may not already be publicized in other media outlets. This process also occurs on social media. It serves as another avenue to hear people’s stories and viewpoints first hand and *potentially* begin a conversation. However, the language is very tricky to master. EL3 described it in this way: “*finding the language that works as well as the one-to-one conversation is not impossible but much, much harder*.” EL3 stated that politicians can directly reach the masses (tens of thousands) via social media – and he said that “*it has very directly influenced the way communications work between constituency and constituent***.”** He considers social media to be “*starting to impact and will continue to impact particularly in professional groupings like LinkedIn for example*.”

EL3 also stated that as a politician, it’s important to “target audience” and “influence people as they start off their voting lives so to speak.” He sees it becoming more possible through social media tools to “implant” more and more visual information and particularly moving images. He admitted that a lot of this is constrained by technology, available broadband bandwidth and so on, but it will happen. Crucially, this research presents evidence that influence begins with mutual recognition and acceptance. He described it in the following way: “*so an instant clip of your MP doing something productive in Parliament achieving a goal that you’ve already notified them that you want. For example, last week was a controversial debate on badger culling. Lots of people have communicated to me that wouldn’t it be great if I could instantly send the clip of me having the exchange with the Secretary of State in that debate*.” He concedes that it will happen - it is not possible to do it instantly now but within a very short period of time you will be able to achieve that. EL3 conceded that “*advertisers lust after that – conveying personalized messages to narrower and narrower groups of people at a lower cost.”* This view is shared by Townsend (2014).

EL2, another MP, stated that social media helps support her work with the media and on certain campaigns which she seeks to promote. Although she uses a public relations specialist, she feels very “hands on” in cultivating her social media usage and presence. Part of her strategy involves writing short blurbs about her recent events and activities and then link them to her multiple social media accounts. She and her team devised a strategy to reach out to her audience to find out what they would like to see her tweet or post. They held an internal meeting where a social media plan was presented along with existing metrics. This was also conveyed on Twitter. The responses she received indicated that “*social media only had a certain demographic - so I became aware of all that, but I was able to use those and those people felt listened to*.” EL6 certainly believes that social media “*enables more direct conversations, and for me at the top of an organization, it enables influence without filters. It enables transparency and authenticity that previous practices perhaps didn’t allow in the same way. You can get out and speak to people but it goes past that. I saw the other week somebody, I was just surfing on the train on the way home, said they were coming to work for X governmental department and they were really excited. So I wouldn’t have known at the top of the organization. So I tweeted back that I’m really pleased you are coming to join us, it is a great place, welcome*!”

EL6 purposely seeks to position herself to be a visible leader, and this extends to her communications with others. EL6 continued that she purposely sought this person out after she had been on the job for a week. The new employee said, “*it blew her away. So, yes, it (social media) is quite special.*” The new employee was essentially surprised to be recognized so early in her job by Perhaps that is an important ingredient to successful social media: the ability to integrate bridging capital in two forms: first online and then in person. Xu and Feng (2014) also found that directed interactions achieved more relational closeness. That exchange between EL6 and a junior employee also gave the new employee the perception of insider status as identified by Knapp (2014) as it conveyed a sense of now belonging to the group. This example of EL6’s tweet with a new, junior employee demonstrates this. EL3 shared a similar view. He found that social media is a “*very powerful communication tool that is much stronger than conventional web/electronic tools because of its instantaneous nature*.”

## Growing networks among elites

Several of the elites began their careers at the same time email and the Internet started to gain popularity. Their journey from the advent of email as a communication tool to embracing social media networks was discussed in depth during the interviews. Recognition through social media networks appears in several forms. For example, two participants, EL3 and EL5, focused on the changing dynamics of communicative mediums during this time and how they adapted. In order to conceal identities, EL3 reminisced that when he was first elected in 1992 and had an email address which was rare, and it was printed on his first business card. EL3 reported that it took a year before “*a real constituent, not a corporate body, and a genuine voter wrote to me by email.*” This shows that the early adopters sought recognition amongst each other as both public and private elites.

By 1995 it became fairly obvious that email was going to become a dominant tool. EL3 deliberately chose not to create a website until after the 1997 election:

“*because the political measure I made was the cost benefit wasn’t worth it because so few people had access to the web in my constituency at the time*.” The location of EL3’s constituents influenced his take up of a website. He said that “*had I represented a university city: Manchester or Liverpool or Cambridge I would have taken a different view because by then there had been an advancement – so how you represent yourself makes a difference in how they choose to communicate.”*

*He said that “you need to be careful how you use it, and instead of engaging people you* *have to remember that there are a lot more people out there that will not use social media to talk to you, and you have to be careful that you don’t only end hearing the views of a limited number of people who are using social media. And that you do not end up viewing the whole world through the lens of social media.”*

He cautioned how solely relying on social media would lead an elite to an asymmetric social structure (Granovetter 2005). Indeed, it also reflects how an elite, by limiting their communicative outreach efforts, could easily privilege one group over another.

Another interviewee, EL5 has seen a number of technology changes come and go in his thirty years in the industry. He said at the start “*there was not a lot of information sharing going on. As we have moved through time, the need to be able to share data and insights and work with partners, both operationally, strategically and politically has evolved*.” He believes it is impossible to work alone and be insular in your efforts: “*to make a success of working efficiently and effectively, you can no longer just do it in an insular way on your own. You have to be aware of the capacity that surrounds you with different partners, and you have to be aware of the data you own that can be of use to other people. And also that other people have that you can make use of. All of that points towards a need personify ‘interoperability.’”* On his view, networking and the ability to work collaboratively is a necessary skill in order to use social media well. Indeed working collaboratively helps develop strong nodes with peer actors as referenced by Castilla (2006).

Popularity in a social network has the ability to create social capital (Donald and Blay-Palmer 2005) this EL6 believes is how social media can galvanize civic pride and it can galvanize activity – “*when you can get things going viral*”. She stated that “*I don’t know if I buy the marketing stuff. I think it is more human than that. You think about the London riots and the clean-up and how people want to do things online and how some stories go viral. It is not about a product or an edge - it actually speaks to something at the human level on that. So the Donnie Belles, bloody FA, are going to relegate them and have, that human story has become massive on Twitter and the internet and has galvanized lots of action from people but it was actually about an injustice that people wanted to do something about. It just works on a number of levels*.” In short, EL6 noticed that these tweets, those that went viral, helped create buzz around a specific topic within an audience cluster (Grabher 2002). The spreadability of a message depends on a variety of factors such as who sent it and its content. If the message becomes viral because of who sent it, the originator would need to have gained respect, and equality of status from a networked group.

EL3 also spoke about the negatives associated with social media and how several colleagues experienced its negative effects. He stated that his peers had “*fingers burned with saying things they have had to withdraw and, of course, there is the infamous case with the speaker’s wife, which is a good example. He credits his experience and discipline to being less reactive*.” Some of his social media contributions “*are trying to stimulate comment about and encourage people to do something particular.*” He also uses it to directly influence his followers or others he engages with regularly. Wanting to recognize another for a similar view and draw attention to a positive action, he retweeted an example of someone having purpose. The tweet signed the anti-EDL (English Defence League) demonstration petition. He stated, “*that is a good example where something I very strongly hold, I was trying to influence public opinion by that and that it was alongside a press release. Despite the fact some of the younger MP’s think this is a super powerful, all signal tool, it is not. It is moving very fast and continuing to evolve. So I am still in a ponderous, scientific way trying to evaluate what works and has influence. I do not take the view or seen any evidence that the people who tweet 30, 40, 50 times a day are regarded as more active MP’s. They are seen as people who waste my time by sending me tweets I don’t want to receive. Finding the disparate audience we will have as MP’s: companies, charities, thousands of constituents from wildly different backgrounds – you do have to be a bit disciplined about what works for a significant number or will have the greatest impact. I think it will be some years before you could write a formula for how an MP should use the tools*.” The ability of EL3 to influence voters (who knows how many exactly, but his example of the EDL petition indicates an ability to not only articulate his stance in 140 characters or less, but also draw from the social media audience and encourage them to take a course of action. It indicates a strong social relationship similar to a network structure that motivates people identified by Kane (2014). It also shows that social influence has developed into a form of networked influence (Gruzd and Wellman 2014). Indeed this recognition of a movement may be seen as a form of conformism and the strengthening of an ideological stance against the EDL.

EL6 manages her account personally and described it in the following way:

“*people ask me to retweet things, to promote things and asking me questions either about what I have tweeted or haven’t tweeted. So what I have to do sometimes is direct them somewhere else. People will bring things to my attention that they think I would be interested in because I’ve said something. So, yes, it is very interactive. There was a tweet that went out the other day that I thought was important for the City and it got 50 retweets. And a conversation thread with about 20 other people conversing and then going off*.”

Promoting a tweet means taking a particular stance on an issue, signalling this intent and calling on others to affirm the ideology behind it as well.

## Setting the social media tone

In order for the workforce, and indeed the public, to engage with the elites on social media, they must reach the third level of the digital divide which comprises insightful users. Many of the elites considered themselves to be leaders and sought to change not only the workplace environment, but create the right tone for dialogue on social media. One of the professionals working in a city noted that social media was frequently banned in the workplace; however, EL6 sought to change this trend “*when I came here we banned social media, the council, nobody was allowed to use it. I just said we are not going to do that – I am going to use social media. They said that with Twitter and Facebook you can’t control it – I said that is the whole point. I don’t want to control it so you got to understand you can start a conversation that people can any ways and that is good*.” This raises an important issue of social media usage in the workplace and how it may be endorsed by organizational leadership. Vaast and Kaganer (2013) found that as employee’s exposure and experience to social media gained over time, their employers benefitted from this skill gain. Both employee and employer benefits from social media usage as both become more comfortable with their voice and visibility online. In addition, Weber (2013) found that policies against social media usage in a workplace indicates already existing tension between employer and employee. Not only does it generate a culture of privilege between different classes of employees, it reinforces existing norms whereby certain skills are not freely acquired and practiced.

EL2 recognized that social media continued to grow in importance and tweeted about how it was becoming more central to her role as an MP and an integral part of her day-to-day life in November 2013. In this way, she acknowledges that social media is important for her success in the workplace particularly for its ability to showcase stories. Indeed her Twitter feed has a lot of stories about the people she meets throughout Northern England and why what they are doing is important. She syncs her Twitter and website so that the story hits both simultaneously. She tweets about every story when it goes on her website. When she does that, she finds that it increases the number of people who go to her website and read more about it. Both her website and Twitter accounts are mutually supportive and linked – so they increase traffic and engagement together.

EL2 also stressed that her online conversations revolved around very local topics relevant to her constituency. Here EL2 tries to raise the profile and awareness of local issues in order to draw attention to them. This form of social media recognition lacks a name presently, but it is important as it takes an elite sometimes to amplify a problem. She also participated in a national Twitter conversation about women in science and board representation/quotas. In discussing this with her PR specialist, she said that “*anyone can be on Twitter and it’s about a whole range of engagement that a Member of Parliament does*.” Meanwhile, her website contains concise stories with more detail than you find on the Twitter feed. In general, EL2 has found that Twitter has been “*a good way for people to get in touch with her*.” A couple of people have gotten in touch with her via Twitter and she has ended up meeting with them in a professional capacity. For constituents who use social media, it’s a good way to contact her and her PR Specialist finds it works better than email. El2’s social media strategy combines attempting to draw a narrative of her local community and highlighting the national issues she finds important. It is about using her visibility as an elite to actively ignite her voice for a specific purpose.

EL2 is very careful not to bombard media with these stories, rather she and her PR advisor take a strategic approach based on what traditional media is likely to cover. EL2’s PR advisor said that conversations with journalists give them an indication as to what media is looking for at any given time, so they are able to cater the social channels with targeted communications. This constitutes a form of semantic network analysis where news frames are used to gain insight into media trends (Fu 2016). She stated that “*Twitter’s focus is... (in terms of regional/national focus) …an interesting question/issue. Whilst it has a global reach, I will tweet about what’s going on in my constituency such as with a local farm.*” Her publicist also maintained that traditional media work is still very important and that “*it’s good to see a lot of the local media use Twitter*.” Local journalists’ conversations on Twitter are also monitored by EL2’s public relations staff in order to tailor their content in order to participate with existing circulating conversations. The elite, therefore, recognizes the important role that media may play in how much buzz they may attract both locally and at the national level.

I interviewed another MP, labelled EL1 for anonymity purposes, who represented an urban constituency. When discussing social media with him, he emphasized the audience issue. EL1 stated that it was an “*effective tool for getting an instant, low-cost communication to a large number of people that something has happened, is about to happen or there is some information that you ought to look at and here is the site to look at it*.” But for this MP, he felt a disconnection from the audience because many of his tweets did not stimulate a response. He called this “tweeting into the void.” This shows that while recognition may be occurring, unless there is an outward and active manifestation of its occurrence, social media has the potential to feel like an echo chamber where one’s voice gets lost in the cacophony of others’ voices.

## Sentiment and the Importance of the Public Audience

The three MPs regularly gauge the tenor and sentiment displayed by constituencies through social media platforms. Monitoring social media helps them to decide how to best react to a political issue that may arise. It provides a valuable source of information about the community’s perception of a problem. The ability to gauge public sentiment allows them to cultivate an authentic message specifically tailored to an audience. Many consult Facebook, where there are frequently professional groups associated with their constituencies. EL3 cited campaigning activities including – “*one of the towns that I represent is a port city and it has a site called Pride and that is quite an active one which I observe very carefully to see what language is being used about things that are happening. It provides a great source of information for me about, but not exclusively about, what younger people are thinking and doing in the community.”*

EL3 considers Twitter to be badly used by most people who want to communicate with their MP. He elaborated, “*it is a misuse of Twitter to assume that it’s a 1:1 communication. And it is me writing to you and saying “please would you give me an answer on …. So I don’t engage with people who try to use that means. My address, email, telephone number, website are all in the public domain so if they want to contact me about an issue, I don’t encourage them to use social media as the routine, especially as engagement with an individual constituent has a degree of privilege associated – people have rights ­– and so yes, it is up to them to determine whether anything I say to them goes into the public domain. But I don’t want to engage with them about their particular gripe on whatever it might be in a public dialogue because I don’t think that is sound basis for having the first conversation with people*.” EL3 wants to be able to control other’s expectations of him, that he is not freely available on one communication platform versus another. By controlling this, he is establishing his reputation as one who is available by more traditional channels so as to appear that his leadership style is not directly influenced by tweeting.

*EL6, also, has noticed a direct correlation between the hashtags used with followers and their associated retweets. She talked about what she tweets and how it attracts a networked audience. She explained it in the following way:*

*“I have been tweeting a lot about the Donny Belles and sometimes if you target a tweet, it goes back to what you are tweeting for: sometimes I am letting people know how my day was, sometimes I’m letting people know something interesting happened, sometimes I am promoting something, sometimes I am campaigning. If I’m campaigning I will think about targeted tweets so that then influences who you get back so it all depends on the nature of your tweet. I did get some comments that I was trying to do too many things with my Twitter and I should have different objectives, but I am just trying to be an authentic leader – really.”*

This follows on Hambleton’s view (2014) on what defines a civic leader. Specifically, it is one who maximizes opportunities within the limitations of their position. EL6, by extension, understands that maybe appearing less strategic in her social media messages, she appears more authentic to her audience. EL6’s experiments with social media messaging, and strives to be recognized as an authentic, very-human leader who is not only deeply embedded in the local network milieu, but uses the social media tools at her disposal to demonstrate this.

EL3 keeps up with what other people are thinking – particularly those he has not met in person, but who represent an opposing view – primarily because he wants to “know thy enemy”. Public sentiment is important to him as it informs him about other’s motivations, emotions and perceptions. As a result, he follows others whose views he doesn’t necessarily agree with as a conscious decision. He is on the email list of one of the biggest climate change deniers because “*I want to see how his bizarre mind works. So I follow quite a lot of unlikely things – there are a few people who I know very little about, know on the margins, that I have followed and have tweeted about me and made me sit up and think in the sense of how I got the argument right and do I need to revisit and re-think what I said*.” This comment demonstrates that EL3’s an insightful user (3rd Level of the digital divide) who has reached a feedback loop: an awareness of his awareness (Hampton 2015). EL6 also contended that social media users “*shouldn’t try and create the conversation in and for the city – we need to listen and then join in the conversation when its already going on, and not try and bulldoze our way in and create a conversation. We have had consultants in, and when we put training packages together and the how to do around social media, we will bring people in to do that*.”

EL6 discussed how she grew her networked audience. At the time of this interview, she was still experimenting with her strategy. She looks for specific hashtags in which she can:

“*possibly enter into a conversation about a topic, some local hashtags I look for, and I need to be better at making lists. I don’t have lists yet, it is one of the things I say I will do one day. I listen to hashtags. If I know there is a particular things happening I’ll delve in and see. I use some national hashtags and there are some particular journalism feeds and blogger type feeds and there are some key opinion formers locally that I just occasionally flip through. I don’t pretend to say I know what is going on Twitter because I don’t know how many followers I’ve got, maybe 2,000 or 2,500, and I am following 1,600 people with over 6,000 tweets. I have been on Twitter for 18 months. So there are some things that I won’t retweet because they might use language that is not appropriate. There are some things I won’t do because of it. There are other times where there is the downside of Twitter; people just really want to have a go.”*

Conversations on Twitter carry a lot of emotion particularly as it can attract attention to something, and sometimes nothing. Just as in life, not every conversation holds tremendous meaning. But, for some, merely exchanging posts with the global network on Twitter matters. It allows a person to measure the scale of their reach and perceived import.

EL6 also stated that being a leader during an intense, emotionally laden conversation can be challenging. She said, “*There are times when as a leader, you see that you are not going to achieve anything in being seen, whilst what I think I might be doing is to logically reason back with somebody what it might be seen as is something different. So I choose not to do it publicly and there are times I use direct messages to say look you can carry on having this shouty conversation but you are just going to shout louder and I’m not going to respond. Particularly if there are a group out there that are vulnerable and they shout and shout and shout – it does feel like shouting.”* Emotions clearly carry on Twitter to an audience as demonstrated by EL6’s statement. The “shouty conversation” from the most vulnerable also signifies the need for a group to receive basic recognition from an elite, someone who embodies a modicum of authority. Recognition does not need to convey respect on social media and in many cases, it may simply mean that it allows for the creation of a subject’s identity or stance. For instance, presence requires voice and visibility and sometimes purposely playing the “devil’s advocate” garners tremendous attention in the social media realm. EL6 noticed this and stated that, “y*ou have to use it as a tool and not respond to it all the time. You have to know when not to respond and you don’t respond after a glass of wine – ever. Sometimes you go back and delete the tweets. It is just a little bit too edgy.*”

## Relationship recognition and its role in the digital economy

The ability to tap and recruit talent via social media came up during several interviews. Recognition of one’s professional legitimacy plays a key function in a company’s pursuit of a talented workforce, one that gives them an edge in a competitive, global environment. One of the elites I interviewed served as a Vice President for a highly esteemed Sheffield company based in the City Centre with offices in several countries including Silicon Valley. EL4 found the potential employee insular in Sheffield as he stated that “*95% of the people here knew each other before they worked here or knew someone else*.” Many of the employees came from PlusNet or SDL and EL4 stated, “*Thank God for LinkedIn. If it wasn’t for LinkedIn, we wouldn’t have been able to tap people up when we are looking to hire. They spread into current employee’s network of contacts - particularly those that they know are good. EL4 admitted going on to “LinkedIn and find their email or phone number to contact them. Or send them a Facebook private message*.” This recruitment method reinforces our linkages where who and what you know have equal merit in getting noticed by them as a potential employee. EL4, however stated he felt that Sheffield market was tapped out for their purposes because the potential employee pool was too small. He loathed recruitment agencies and did not feel they provided good matches for their needs, in addition to commanding a fee for their service. He is hoping that in the future, word of mouth via social media will help the company tap into new talent and mused about changing their entire current recruitment paradigm. He stated that “*recruitment consultants don’t help not hire any idiots. You find someone who knows a friend of a friend – you have a slight better chance that this person won’t be an idiot.* *I can point to a few examples that they interviewed someone, they weren’t sure afterwards, found a friend of a friend on LinkedIn…asked a mutual friend the truth about someone and found out that this candidate was bad. We have to be really careful to minimise impact of poor hiring decisions.”* The tapping into a social network-to-hire description aligns with research about how director level or higher groups will utilize networks to find suitable employees more than other socio-economic groups (Forrest et al., 2001; Michael et al., 1993).

EL4 finds it difficult to fill both junior and senior level positions in Sheffield, but not the mid-level jobs perhaps because once a professional has reached a mid-position, they have a strong network already established locally. He stressed that they look for the “*right attitude, not a certain skill set*.” I inquired into this intangible attitude and was told that they look for people:

“*who is passionate about doing a good job and someone they could trust to do a good job. I like to get things done, cut through the bs and the poisonous politics of work. We expect people to manage upwards. We want people to tell us what they’re doing, what they’re doing next. These people have an enterprising way of thinking with initiative where they’re going to work for their money and add value to the business. People who work here understand the business a lot more than a lot of places. It’s not an experience thing.*”

## Representation and Identity: presence and recognition

The next section details the way in which elites curate their public presence on social media. It highlights the features of their identity which have value and meaning to them and how this facilitates public trust. Media plays a role how people understand themselves and others. In this section, I outline the ways in with the elites understand their public persona and their leadership position in the realm of social media. This is particularly relevant as mass media representation sometimes depicts narratives and counter-narratives about people and places. In this section, I describe how the elites strive to narrate and represent themselves and the places that are important to them within the public realm of social media.

For EL6, her social media presence is not about counting the number of followers, but the quality of the interactions. She noticed that the business community in her town (referred to as TownX) set up an amazing called #TownXisgreat. It is not the Council’s hashtag. Instead it has been born out of TownX’s business interests to engage in the digital community. EL6 mentioned that she used the hashtag, but it also caught on so now others outside of TownX use that hashtag. Again, the use of hashtags with a person or place appears to impart a sense of belonging, inclusion and insider status to those that champion it (Kane 2014). It also strategically places TownX into a wider urban narrative online along with other places that adopt a similar approach. For example, New York City’s most popular tags include #nyc or #newyork and this helps social media users tie story threads together. The approach to use a #nyc or #TownXisgreat both serve to try to elevate the reputation of the town both visibly and vocally. Hence, it generates a feeling of belonging far beyond the urban area itself, but a recognized presence around the globe where an expat may tweet “Saw footie win #TownXisgreat” from Australia. While this level of recognition is not emancipating, it does help foster the notion of community beyond the geographic boundaries of that specific location.

Deleting tweets became a controversial topic of conversation during the interviews. EL1 said:

“*I tweet. You speak. Sometimes when you think about the spoken word, you might something at one time, and you think, Actually I didn’t mean to say it like that. What I meant was. So Twitter is the same for me. You will say something and not covering so much as I got the message out there to that person, but if it was there for posterity people might or not know what it meant, so I’m going to delete it. So that is how I use it*.”

As EL1 is also an MP he believes that social media is a tool that “*being a politician is about connecting with people as you know and social media is just one of the tools that are available to do this. I represent about 115,000 people and it’s difficult to communicate with that many people at the same time, and people want to be connected with differently, and in that respect social media provides a way of connecting with some people quite effectively.”*

EL6 is a Chief Executive (but also a leader focused on relating/connecting in her locale) for a northern English city, who believes that Twitter “*is about creating more leaders than followers. I tend to believe that you have to live your values and people have got to see your values.*” She continued to define her role as: “m*y job is to help shape this community to make sure that the place and people thrive and that the organization that people have is one means of doing that; it is not fundamentally about me being here at the top of an organization providing services but about shaping the place we are in. So because my location has a reputation problem, I thought there were a number of reasons I need to do it. One, to talk the town up nationally because it was seen as this kind of basket case, and you know the city’s image and reputation doesn’t really match what is happening here. I think that my city’s reputation from a business point of view could be better. There was that – I wanted to get messages out to the workforce and partners and others in an authentic way and I wanted to be a human behind the organization. And I wanted to be transparent about what was working and what wasn’t working, so that it wasn’t just about speaking but about people being able to interact. So for all those reasons a very conscious reason to tweet and I chose Twitter.*” Civic leaders are well placed to change and manage the reputation of a place in the long run because they have intimate, location-based knowledge. They need a keen sense of observation to describe what is happening in that location in real time. This is a key component to social media – the ability to magnify what is happening now as opposed to the past.

I noted that she was very comfortable with who she is – authentic, accessible, and most importantly, relatable. She seeks to present an image of herself that is true to who she is – legitimate, but is clear to point out that “*I am not the Council*.” Sometimes, she perceives that Twitter followers treat her account as if she is the Council. Her voice amplified by the network on Twitter brings her City to social media. She is showing residents how to be a civic representative, and importantly, she allows people to understand a location better through an alternative representation. It subtlety communicates the vitality of the city out to the wider society. Therefore, her tweets provide a unique vantage point from which to understand her City’s identity and self-representation – despite, her rejection of actually “being the Council”.

EL4’s also expressed this because his company was undergoing a rapid period of change that there was a certain representation/portrayal of themselves that they wanted to get across to others. At the time of the interview, the management team photos were considered to be “*quirky, fun, cartoony and off base – not stuck up and corporate. In a year’s time, I think this will change as there are new, strong characters coming into the business. It will be interesting to see how they influence and change things*.” Change is being strategically managed in order to effectively grow at this Company. According to EL4, the CEO likes to maintain a very un-average CEO image. The company tries to appear cheeky and risqué to appeal to the Silicon Valley set and will even have the requisite “booth babes” at industry trade shows. A few years ago, they gave away t-shirts at trade shows that said “ProductX never goes down on me.” He described it as a very-US thing, slightly cringe worthy with lots of testosterone kicking around and it works out there (in California). EL4 reported that he does not use social media outside of LinkedIn (and a personal Facebook) anymore. It takes up too much precious time with little upside, for example, he reported spending 14 hours a day answering emails.

He likes to use Facebook as an internal communications system with junior staff members. While he is travelling, he uses Facebook to check in with his teams. He can tell if someone is angry or frustrated with work. Employees in teams can also message him and get responses immediately. He likes proactive team members who will manage themselves, but also stay connected with each other both inside and outside of work. He realises that this use of Facebook is unsustainable in the long run and is looking at internal company social networks such as Jive to replace the current system. A proper internal messaging system would aid team collaboration, but will require politicking among other company decision makers in order to implement effectively.

He has noticed that there are a lot of high tech elites in northern England who spend their time trying to cultivate an influencer reputation with the wider public by sharing articles which contributes to conversation and, thus networking off the back of that activity. He has been invited to attend Yorkshire Mafia meet-ups, but he doesn’t have the time to spare. Yorkshire Mafia constitutes a small to medium sized business social networking group for company Directors or Partners based in Leeds. They are touted as “*a* ***tightly knit group of diverse industry executives who share a homogenous interest in the advancement of the Yorkshire region*.”** If he is forced to attend networking events, he tends to enjoy it and meet new people. We talked about networking in Yorkshire and Sheffield. He has a lot of mentors here, they have become decision makers in the technology field in Sheffield. He will go to this group for advice about other companies, problems, potential new employees (whether they know someone’s reputation).

LinkedIn helps him manage the company’s growth and recruitment needs. He has encouraged team members to recommend LinkedIn connections for available positions. He is an advanced user and views it as the appropriate place for making connections. He will approach people on it with a view to making professional contacts that he thinks will add value to the business. Sheffield as a location does not have a lot to offer the business apart from a well-educated, more cost-effective workforce (outside of London). He stated that Sheffield tech employees earn approximately half the wages found in London with comparable skills and experience. His connections influence the decisions he makes about the company. He’s been looking into a new system for tracking work and managing software bugs and consulted three other companies who evangelized it.

## Privacy and Identity issues

Issues of privacy came up with a number of participants and how to separate their personal lives from a public persona. The boundaries between the personal and professional are more porous. Abril et al (2015) contend that millennials acknowledge their online vulnerabilities, but will not sacrifice their presence, and multiple performances, and give up their participation. Judgements across contexts are discouraged by those who reveal detailed information about themselves online. However, a paradox presents in which sometimes they feel free to comment on others’ performances. Reasonable expectations of privacy hold firm among members of society. The elites commented on this but are also aware of the burgeoning rise of context-driven factors which may lay bare the privacy tensions. For example, four of the elites lamented the days where they were once able to hold a conversation in person or over a phone with someone and it would remain private. EL3 expressed a concern for the public nature of a private conversation.He stated that the **“***media is not a place for complete civic transparency*. *I have just been dealing with, a few months ago, an individual who had applied to a post in my party. I regard him as an unsuitable person and one of the things I was able to pass to the national executive committee was the trail of what he had previously said on Twitter about people within the party. You cannot be as candid as you might want to be, so in this case he did me a favour*.”

EL3 spoke about the tension which exists between his public persona and private self online. He said “*oh there is a line and a tendency for that to stretch from how you physically present yourself – you wouldn’t go to a meeting in the morning having not brushed your hair. So there are standards that you would simply take from every other aspect of life and personally you have to be pretty disciplined to make sure that includes language as well.” In his view it is not appropriate to use certain words in front of children or adults who are sensitive about it. You have to remember that the very nature of social media means that if you are not careful your words are going to be seen by people for whom they are not appropriate. So, one needs to be a “little bit disciplined about how you express yourself and not be as candid as it might be if it were to be a one to one conversation with a group of friends. A handful of people in the room or sitting at the pub talking about your boss saying he was a bit of a clown is pub banter. Putting on the social media has already become a sackable offense. It has been difficult to say from an employer’s point of view why any employer wouldn’t be pretty upset if they discovered a rant by their employee, however justified, is being used that way. So you can’t be as candid as you would be in a normal one-to-one or small group conversation and that is true with anything you communicate that can be reset. It is true of emails. It is true of web communication”*

EL6 sometimes feels personally exposed tweeting all of the time and seeks to strike a balance between her professional and personal life. Professionally she feels that it is important to relay some personal information about herself, but that it must be controlled: “*the personal stuff can feel quite naked and sometimes you can do say stuff about football and I just get horrible stuff back and I think, Why did I do that? You want to explain what you are doing and some of that might be about, for example, taking about the economy but you are doing something with your family. When it gets that close it just becomes – I find it more difficult to negotiate while I am pretty clear very often about some of the things I want to do or things I am happy to pass on for others. When you explain the personal stuff it obviously goes down well because people see a balance of the two but it is the stuff you feel a bit raw about really. A stupid example, I never use my children’s names on there. I will say what they are doing but I call them #1 and #2 son.”* She feels that she can protect some of her home life by talking about them in the abstract.

EL6 believes in a very transparent leadership style: “*I try not to say things that you wouldn’t. I just believe in being very transparent. The danger is that sometimes you have to be sure that people aren’t looking into your stock room. And that is the other thing about Twitter, you just have to remember to don’t give everything away – hold a bit back*.” EL6 also cited an example when her leadership style was discussed on Twitter. She said “*there is a politician who is a leader in a London borough and she was commenting on the importance of passion in place leadership. After I had spoken at an event this week, a politician tweeted, “Good to hear from EL6 and hear more about #TownXPride – a passionate leader about her place, lots exciting*.” EL6 explained that she did not coin that term, but now people begin to associate with that hashtag from outside the City and how it has been retweeted by others.

The role of social media in society is still being negotiated. Acceptable norms and standards also appear to vary based on generational differences in social decorum. How digital natives and adopters navigate these waters is currently being played out in public through the news headlines. Eventually, society will eventually settle on a preferred method, only to have it redefined by the next generation.

## Leadership and the nature influence

The civic leaders who participated in this research mused about the elusive concept of “influence”. EL3 reflected on the nature of influence in social media and said, “*I am not sure whether influence is the right word in the sense of the way an advertiser would use the word. The most obvious example recently is the American, Roger Pielke Jr., who writes on science policy. He was at a conference I was speaking at and he tweeted a few things that I’d said. So then I read what else he had tweeted. I was not entirely sure if I agreed with what he said so I gently put out a teasing question to see where other people were coming from who had been to the same event. It was quite interesting. People came back agreeing with my interpretation rather than his and then a couple of days later, he said something that made me think either I misheard what he said or he has been influenced by the system and has adapted, not changed, the way he expressed himself. I suppose it is a bit like if you and I had a conversation on something controversial where you strongly hold and I strongly hold how it occurs on a one-to-one basis is quite different than if we had an audience of a hundred listening to the discussion.”*

EL3 also stated that as a politician, he feels it is important to try to “*influence people as they start off their voting lives*.” He sees it becoming more possible through social media tools to implant more and more visual information and particularly moving images. He admitted that a lot of these ideas are constrained by technology, available broadband bandwidth, smartphone usage and so on but it will happen.

We talked about how EL3 manages his social media and what he decides to share. He admitted that his communications are less strategic than others, in that he allows himself to just react on occasion. He described in the following way: “*occasionally it is something that happens that I just so much approve of and will tweet or retweet myself - it is a reaction. From a political point of view there is always a danger in reactive, instant, kneejerk stuff. You have to be very careful and disciplined about it.*” This example proves that recognition on social media is a real possibility, and that an elite could develop a negative reputation as a result of a poorly phrased post.

EL2 described how she filtered who she follows because “*if you follow lots of people, you can lose out on Tweets, so it’s not perfect. It’s a direct way to contact some MPs*.” I asked her to clarify the difference between Twitter and email communications and she expressed the need to make a judgement in each case. “*There needs to be some interactivity as otherwise people who like to interact on Twitter find it frustrating that as an MP you bother to use it as a form of media at all. I don't engage in long discussions with either constituents or anyone else on Twitter as they are time consuming, not necessarily productive, easily misunderstood and very public. So I tend to respond briefly and usually not more than a couple of times and if more input needed, ask them to e-mail so I can pick the issue up properly*.”

EL6 had a PR strategist/social media expert look at her media usage recently to provide some advice. He found that she was not targeted enough and all over the place on her Twitter usage. He felt her communications were too personal and a menagerie of comments. He advised that her Twitter feed should “*make it more targeted and columnsy*.” Her response was that his advice felt instinctively wrong, perhaps because her leadership style stresses being relatable and developing relational ties with others. EL6 felt that if she was out there to grow a consumer market it might make sense to follow this advice. However, political leaders appear to have more success on Twitter if they are more random in how they express themselves and appear to have a similar values and ideas.

## On collaborating and identity

The idea of collaborating together to achieve a central purpose in a civil manner was judged to be simply a nice concept that lacked substance in practice. Three of the elites: EL1, EL5 and EL4 stated that collaborations which took place in an open forum tended to be “poisonous” and get bogged down in intricate arguments about ‘what colour do you paint the shed?’ because EVERYONE wants their contribution heard and people feel that they will get rewarded for contributing. Collaborating appears aspires to be a meritocracy and encourages the development of the best standard. This concept is important because it signals that the elites are aware of their privileged position and that it is not possible for everyone to be visible and have a strong voice in a matter. This plays out on social media where users jockey for attention in a space espoused as open, transparent, democratic and fair by tech giants.

Leeds continues to strive to be inclusive of its population as it seeks to re-brand its governmental functions. They ran a pilot project called “Voice, Context and Civic Identity.” A consultant is helping them plot it with workshops on how they may work towards becoming a more social organisation. As part of that work, they’ve determined that while it is easy to create a digital identity, and it is not too hard to have a voice, but “*understanding the context of why we are doing it, and who we are engaging with and what the benefits are, and who benefits, that’s where the problems lie*.” EL7 went on to explain that “*the key word is context, we tend to do things because we can - not because there is a purpose or reason. So it’s channelling what Leeds wants to do, and what they know and what they don’t yet know so that we actually do things for the right reasons. And that is what came out of the pilot: networking takes time, and it’s time that they need to build into a process and project*.” For EL7, the social organization project is not just about the tech and IT pieces of it – it’s about the human relationships and the ways in which people work together.

## Linked and open data ideals

One of the elite participants, who is a well-known expert in technology whom I call EL7, is enthusiastic about possibilities of linked data. He sees it as is an enabler for services, along with commercial and social platforms. The idea of incorporating linked data into the systems architecture was a reaction to seeing expensive scandals play out in the public realm before Parliament. EL7 explained that, likewise, the buzz about “*open data started from a scrutiny into financial expenditures on IT projects for the public. These projects are about enabling somebody to sit at home to download that information and effectively run their finger down the list of payments and say that is an interesting one, why are they spending all that money with them and I want to more about that. So open data, just at that level, is a means to an end. If we had done this at all traditionally we would have put that information out in a document so you would have seen it but as an individual you could not have sorted it or filtered it or added it up or joined it with somebody else’s data*.” The conversation with EL7 was very much about the data in some places. For example, he stated that data began with “*here is our information in a document or on a web page so look at that. And when you are finished go away and maybe come back next week and there might be something else” but because it is a document, you wouldn’t be in a very good position to spot what changed or the like. The value of linked data uses data sources, and provides a structural hole and it operates like a social network. If Ordnance Survey, for instance, released all of their data to Google and who do not monetize it directly – is this a social benefit? How does help the public?”*

Data initially came to EL7 as a tool for scrutiny and making authorities answerable directly to residents and for “value for money” thinking. In this instance, the government felt more responsible in the way that they were spending public money. EL7 explained that “*with the demise of the Audit Commission, which was the organization that had been in that role, and a move with the current government towards making that scrutiny role something that could be driven by local people and be more democratically engaging. In his field (open source software), there is a lot of online collaboration that goes on in (old fashioned) mailing lists. Mailing list posts can go on with 2000+ posts between collaborators. There’s a lot of politics that go on here and influence the way that software is designed and developed. It is collaborative and only minor differences are present between competitor’s products. On mailing lists, “rock stars” call the shots. Mailing list collaborators meet twice a year and these end with hackathons*.” The close scrutiny of how government spent money by the public brought recognition, one that generated significant tension, to the ways anyone from learners to elites spent public money.

Data represents a subject difficult to place within the recognition sphere. It lacks human traits, does not illicit warm reactions or emotions from the populace. Yet, elites, and sometimes knowledge workers, want to know what is happening on a countrywide scale in terms of larger trends. It is difficult to sway public opinion and data transparency, linked data and other data products because they lack a human-scale, authentic, relatable presence on social media. Therefore, it lacks a tangible foothold in the typical social media user’s imagination.

## Conclusions

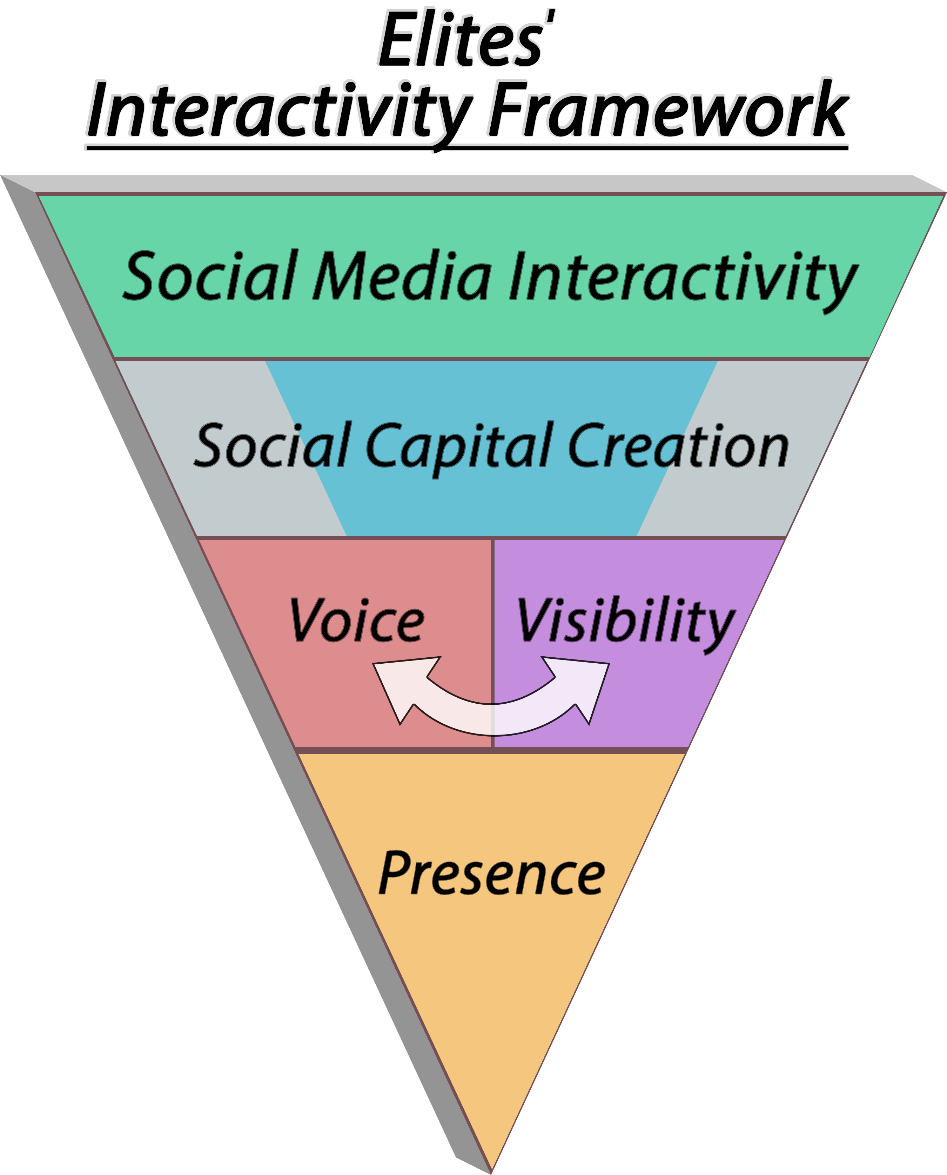
The elites are determined to extend their local, national and global reach as much as possible. However, local and national reach appears to be the most important to their employment success. This cohort spans both networking and engagement sections, and also pervasive awareness is beginning to emerge as an important factor in their networking behaviour. This cohort does not face such an uncertain future; however, the proliferation of short term, temporary, and self-employment contracts confines their continued employment status in a frequently precarious situation. Only a few of the knowledge professionals had secured, long-term employment. Their job prospects rely on media ubiquity and the concentration of homophilic networks centred around the City. As it stood at the time of the interviews, very few permanent jobs existed for this group; hence many relied on self-employment to maintain status in the workforce. The self-employment was also predicated on the strength of their networks, value of work and reputation.

This score reflects the fact that knowledge workers have few access concerns, strong networking capital and emerging pervasive awareness of the circulation of work locally. This group relies on having strong sociability among all network ties and the ability to forge them together to produce further work opportunities.

**Figure 13: Elites’ Interactivity Spectrum**

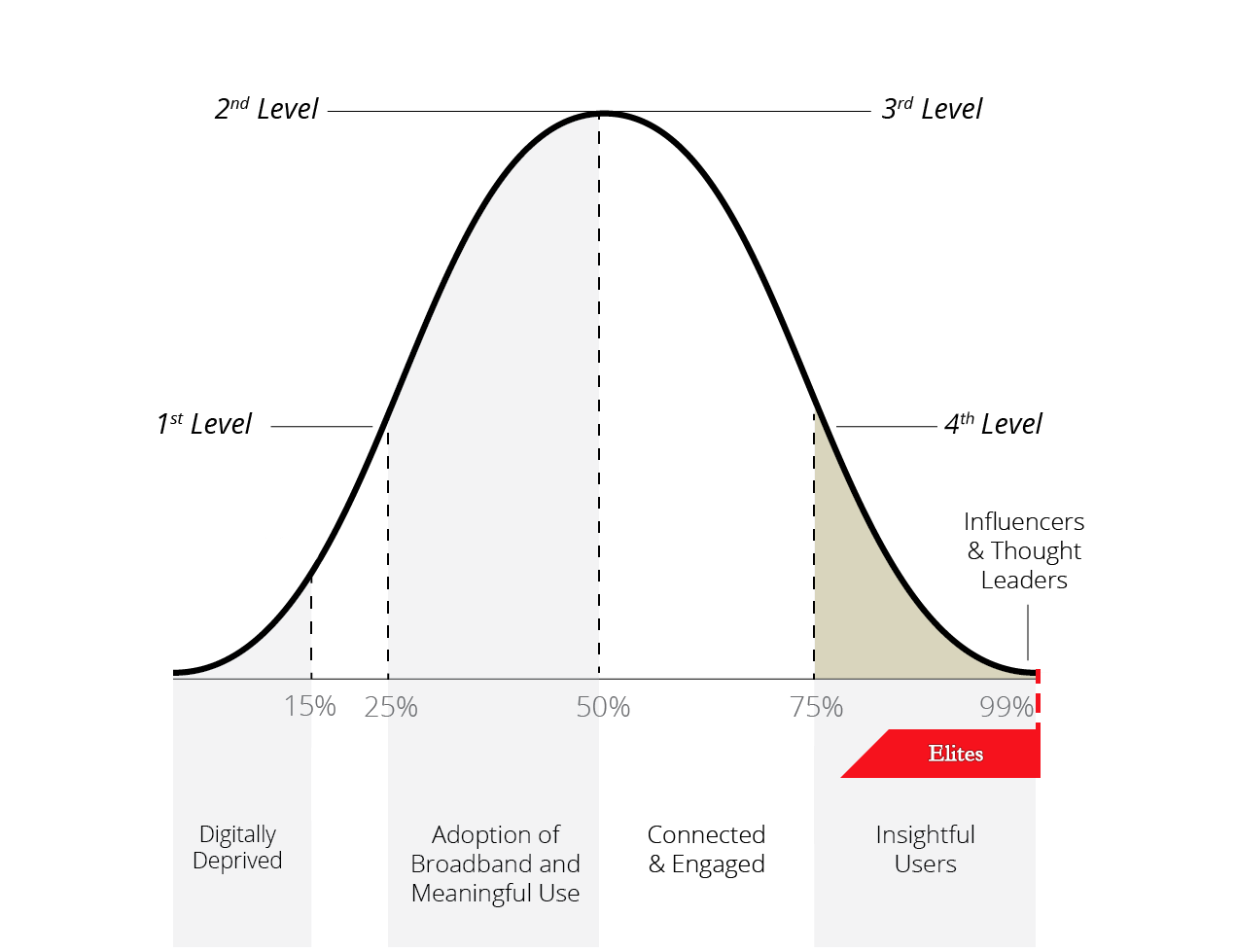
Their ability to represent themselves and the Sheffield community also figures prominently in this spectra grade. They have a strong sense of the community from which they come from and do their utmost to showcase the Sheffield image along with their own creative content. This co-portrayal allows them to forge a presence that is both validated by their own network, but also has the potential to be recognized by others nationally. The presence is built on content and recognition by others. It is also contingent upon the merging of both their voice and being visible locally. It is virtually impossible to launch, and be validated nationally or globally without some semblance of a strong locally-based, homophilic network unless the knowledge worker verges on the category of “expert” for his/her field. Most importantly, professionals benefit from a strong sense that they can be themselves in the public arena that is social media. They do not have to necessarily conform to the unwritten rules of governing their appearance like the elites.

In summary, elites represent the third and fourth Levels of the digital divide. While they do not live their life online, they suffuse their social media accounts with content and information in a mindful way. They sometimes use public relations help which adopts an approach as an efficiency expert and/or social butterfly (Lee 2013). In addition, many of them serve as gatekeepers to public information or recruitment/jobs intelligence. All of them demonstrate strong, meaningful-use literacies combined with an awareness of both local and national trends. Thus, representing a portion of the population that is aware of their awareness (Rheingold 2013.



**Figure 14: Elites’ Interactivity Framework**

The Elites’ Interactivity Framework shows how their interactivity filters into a social media presence. However, it highlights the fact that because it does not interact with a variety of people. Similar to computer learners, elites follow few people on social media outside of close friends, family members and colleagues. The primary difference from the learners, however, is that they will have many followers, or people who frequently look at what they present on their social media accounts. As a result, their social capital creation is primarily bridging with little to no bonding capital. In addition, they will use their voice and visibility to amplify their presence.



**Figure 15: Elites’** position on the bell curve representing the levels of the digital divide

As discussed in Chapter 2, Individuals “living life online” through media (Rheingold, 2013; Newton, 2014) are representative of the fourth level of the digital divide. In this space, online and offline identities merge and it represents how elites approach their online and offline presence. While in many cases, elites do not manage their social media accounts personally, actions important to their identity are highlighted on social media as an influential member of the public. For instance, when an MP debates another in the House of Commons, it may find its way to a video clip posted on his/her Twitter account. Not only does this enhance their reputation and identity, but also merges the way the MP forms a presence with his/her actions. Elites signify, too, the top 1-2% of the population. The ones who participated in this study are insightful, informed users who seek to be leaders either in the public or private sectors.

CHAPTER 8: SOCIAL MEDIA AND STRUCTURAL NETWORK TIES

In this chapter, the culmination of each cohort’s overall social media interactivity is highlighted against their social network ties. This approach allows the discussion to advance beyond interactivity to unpick the relationship between social capital and social media usage. This relationship revolves around the relational ties which are fostered: how they manifest online and are harnessed by social media users. I present a social structure analysis for each of the cohorts. The connective tissue between each cohort and the institutions, in other words their relational ties, are analysed for their strength, proximity, importance, and reciprocity. This method illuminates the opportunities available to the cohorts to build social capital through their networks. By highlighting the network in an infographic form, the social position of the three cohorts on an individual basis becomes clearer.

The overall sociability will also be evaluated in terms of the social network ties, and their attributes, present among each cohort. When I evaluated the interviews for each cohort’s interactivity characteristics, I developed spectra to indicate the number of instances where it was discussed. For example, the computer learners measured highly against the category for Technology and Data Linkages category with some Networking and Engagement characteristics. Their interactivity levels did not include much, or any, interactivity in the Representation and Identity along with Pervasive Awareness groups. What does this mean for the learners? And, what might they be missing out on? Evaluating simple social networks, which have been mapped out based on interviews with individuals from each cohort gives an indication as to the part each play in the digital economy. In this section, I will evaluate the nature of the relationships between actors and institutions through their ties. These ties allow messages to be transmitted, exchanged and interpreted.

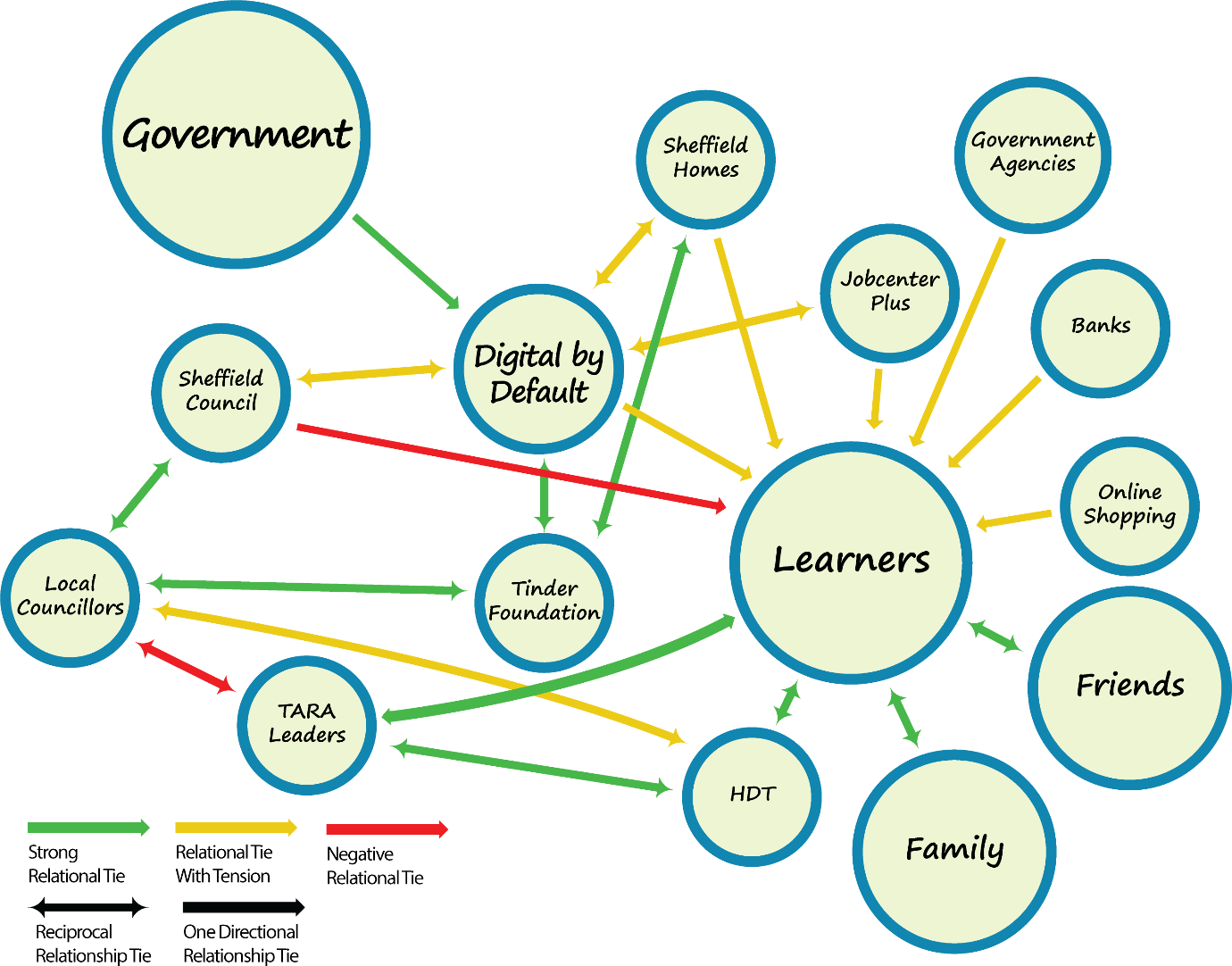


Figure 16: Social structure analysis of learners showing the relational ties and relationships computer learners have which reinforce their social position.

The learners’ social network acts as a model showing the various organizations, people, and institutions from which learners interact with online and in person in order to ensure their survival in society. The actors, highlighted in each figure, are fundamental to the livelihood and social position of each cohort. For example, the learners are dependent upon Sheffield Housing to provide for their housing needs. They are also dependent on TARA leaders to effectively advocate for them within the city government. The reciprocity of their relationships are also highlighted in each of the figures. The green represents a strong and effective relational tie which serves as a catalyst for each of the actors. For instance, the learners have a positive relationship with Heeley Development Trust and the TARA leaders. Both of whom advocate for their needs and seek to provide them with learning opportunities. Arrows indicate how the relationships flow between the actors. Learners have tense relationships with many of the actors presented in Figure 16such as the Digital by Default policy which they feel dictates the transactional relationships they must abide by to have their voices heard by Government.

Tense relationships between learners and actors occur as a result of a lack of participation in the design of the relationship. Learners are reliant upon JobCentres, Banks, Online Shopping and Sheffield Homes to actively participate in the economy. Yet, the online platforms implemented by banks, stores and Sheffield Homes do not invite learners to collaborate in their design, nor do they seek out their opinions. They must reciprocate on terms entirely devised by the actor. There is a lack of voice and visibility on the part of learners on these platforms in how they are designed or implemented. The negative ties, represented by the red, form a crucial part of the relationship between the learners and Sheffield Council. This relationship extends to their advocates to the Councillors, the TARA leaders. The lack of positive transactional relationships with institutional actors greatly hinders the computer learners’ ability to advocate for themselves with either voice or visibility.

Some of the ties indicate relationships actors would rather not have; for example, a negative relational tie exists between TARA leaders and local councillors. When this negative relationship exists, it extends to the learners. The local councillors represent the gatekeepers to Sheffield City Council, who continued to progress with welfare reform. The negative relational ties, as portrayed in red, show how tensions and trust have broken down between two parties. The presence of bridging and bonding forms of social capital both mediate acceptance and exposure to new ideas (Leung et al 2016). Simply put, bonding social capital develops among people who have features in common while bridging occurs among people who are less similar (Putnam 2000). The learners’ classes facilitate learning through bonding social capital as the participants have a lot in common: tendency to live in the same neighbourhood, similar ages and educational attainment. The classes also function as social occasions where people learn, chat and have a cup of tea together. Some will socialize outside of the classes as friends. However, the learners never socialize online together through email or social media. The relational bonds which are formed during the course are built in person and remain confined to this. Indeed, their social media connections also feature links with friends or family. One learner reported connecting with Rylan Clark on Twitter. He had previously followed his appearances on the X-Factor and wanted to establish an online connection as well. The learners will only socialize online with people with whom they have established bonding capital if there is no opportunity to see them in person. For this group, social media does not serve to augment their socialization, merely replace what is lost. One learner stated she liked to come to the course because she could have a “right good natter” with people there, but this same dynamic does not exist online. The are many possible reasons for this. It could be that there is not a critical mass among the learners who know how to do it well enough that adopting social media fully would expose their skill level to others. From this perspective, pride figures heavily into the decision as they may not want to show new friends or acquaintances what they perceive might be an inadequacy. The classes do foster reciprocity, solidarity and strong network ties among the course participants.

The learners perceive having an authoritative, strained relationship with Sheffield City Council and Central Government. Their economic survival is predicated on this relationship. Trust, reciprocity, and status are not conveyed in this relational tie and it is illustrated in a one-way directional connection. For the governmental institutions, they exist solely to provide policy leadership and facilitate communications to the public about decisions. The learners, on the other hand, rely on this asymmetrical relationship for their economic and social survival. It does not confer any measure of social capital as it does not generate links to resources, status, or facilitate links with any other party. While learners prefer to form homophilic ties based on individual preferences, the circumstances, and directional flow of their survivor-based relationships lead to isolationism among the city’s social networks. While the relational tie between learners and Sheffield Council is supposed to be two-directional, in theory, it works out that budgetary constraints have limited the democratic dialogue between the two groups. One has a voice and visibility; hence the benefit of having a presence, the learners do not.

Heeley Development Trust and the TARA leaders, however, have an emerging two-directional relational tie. The TARA leaders trust in the product and output of Heeley’s digital economy programs. Their connection also illustrates another form of bonding capital with ever widening allegiances throughout the City, beyond the boundaries of HDT’s organizational boundaries. On the other hand, this alliance connects the digitally excluded across social divides of roles, status, identities and beliefs, and new information ([Gittell and Vidal, 1998; Putnam, 2000; Yuan and Gay, 2006](http://www.sciencedirect.com.ezproxy.lib.purdue.edu/science/article/pii/S027795361630332X" \l "bib20)). The larger spectrum of bridging capital prevails as the TARA leaders at Westminster pointed out that they were reaching out to other TARAs for advice on bringing broadband to the social housing estate and setting up a computer lab. These ties were not forged randomly, but based on the shared attributes such as residing within a social housing estate, having a strong community group (a TARA), digital exclusion and the desire to improve digital skills. The bridging forms of capital, such as with Sheffield Council, demonstrates a tie that does not feel human. Therefore, the benefits of bridging capital continue to evade learners as not one bridging capital relationship has two-way directional ties with a strong trust component. Bonding and bridging capital may exist as complementary concepts that can occur together within a network (Leung et al: 2016) as demonstrated in the social network analysis for learners. It is problematic that all of the ties associated with the learner’s survival are formed through a one-way tie with tension.

The learners do not see the existing tensions between Sheffield Council, trying to provide resources and services to the public, with other public institutions. Effective incorporation into the digital economy entails being exposed to a broad range of people and information. This combination helps groups secure resources and a sense of belonging into wider society. The learners live with comfortable, bonding networks with people from similar status and values. While this has ensured their survival in the past; it does not translate into survival in a global society where people from a wider range of statuses, values or contexts are more likely to be connected. These heterogeneous ties allow people to be more open to alternative perspectives. New ideas may be limited in their ability to disseminate and influence others because ties between diverse people (bridging capital) take longer to build trust, reciprocity and cooperation for them to be effective.

## Social structure analysis: Knowledge workers

The knowledge workers are characterized by their high interactivity profiles in technology & data linkages, networking and engagement and representation and identity. Their interactivity levels directly influence their development and maintenance of relational ties. The individual attributes that influence the formation of ties can be distinguished by status, values and contexts (including the ability to digitally interact in a professional setting). Ties formed by status describe the tendency to associate with others who have the same or different social status or demographic characteristics (Leung et al 2014). Ties formed by contexts describe the tendency to associate with others who are with the same or different organization or community (e.g. church, neighbourhood, workplace). Contextual ties can overcome initial barriers of trust and reciprocity posed by differences in status or values, these are predicated by listening and validating. For example, a knowledge worker’s social media profile may comprise of a number of followers. Knowing how many actually listen and validate posts extends beyond merely retweeting or liking a post. It constitutes a subtle preoccupation with active status and relationships. Content feedback loops occur in these circumstances driven by a fear of missing out on what is posted by others and the need to constantly engage in response. Sometimes this anxiety of being out of the loop drives content and post creation.

Bonding and bridging may occur simultaneously in a social network between ties as referenced by Leung et al (2015). For example, global elites sometimes connect with knowledge workers LinkedIn or Twitter depending on their organizational identity. This may occur if there is one bonding trait between one of two individuals from varying cohorts. The other directional tie may merely be strategic in that the global elite casually monitors the social media activity an employee. Where a tie is perceived to be important depends on the number of followers and a high level of interactivity that can be observed. Where the tie is perceived to be importation, active listening and validating appear to have more impact than the just presence. Validation and listening occur when the presence has enough status in the social media hierarchy to warrant attention. This process becomes a self-fulfilling loop. It begins with a social media presence (consisting of visibility and voice), but a further transition only occurs if this is validated from an outside entity. This happens when the social media presence furthers the reputation of an entity. For example, a presence may be boosted in this way if you incur a reward for providing a review of a product on social media that a company deems to an enhancement to its image.

Knowledge professionals maintain strong relational ties with many of the actors represented in Figure 17 on page 275. Some tension exists between Sheffield Council and both the Workstation and Electric Works. Neither project boasts a 100% occupancy rate and struggles to find tenants at times. As a result, Sheffield Council questions whether it made the right decision to develop workspaces for creative and digital professionals in the Sheffield city centre when other communities have not benefitted equally from this investment in the workforce. The tension, therefore, exists between these office spaces and Sheffield Council. In reality, the tension masks the real issue of Sheffield Council needing to justify this investment to the remaining residents of the city who do not benefit from a cluster of these industries directly.

The knowledge workers also indicated having positive and negative relational ties within their industrial peer groups. This is represented in Figure 17with the green and red arrows. The tensions and negative ties in the knowledge cohort happens between junior and senior colleagues and between professionals and their senior colleagues. Senior colleagues, however, do not perceive a negative tie from either the professionals or junior colleagues. Professionals also do not perceive the global leader elites well because there is no transactional relationship – similar with the senior colleagues. Knowledge workers, much like the computer learners, only perceive strong relationship if a transactional relationships flows between the ties in a collaborative spirit.

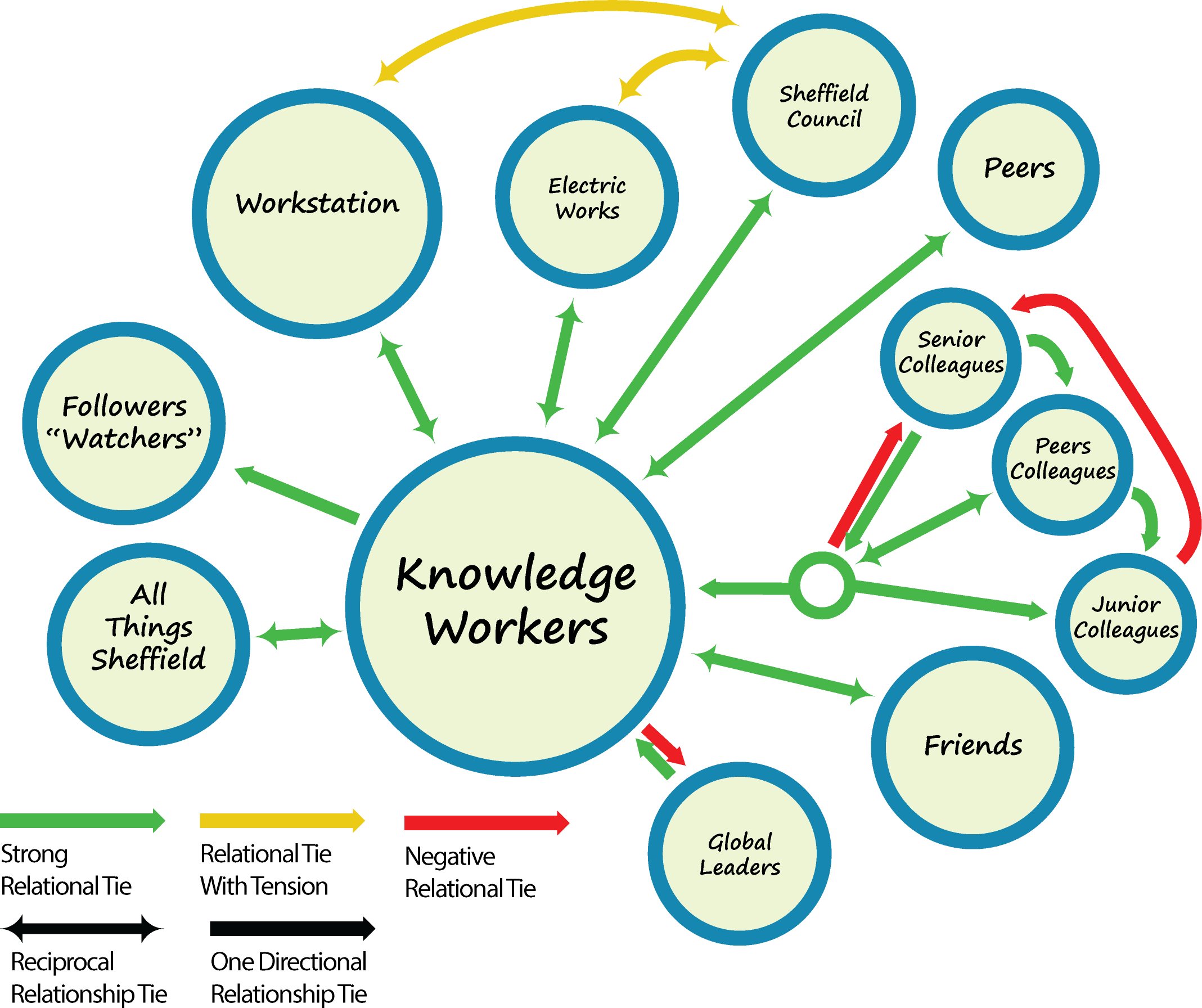


Figure 17: Social structure analysis of Knowledge Workers – The relational ties and relationships which exist among knowledge workers. This network reinforces their social position.

This active listening/validation process occurs at both the Workstation and Electric Works, and Sheffield City Council to some extent, via the creative professional tenants of these workspaces. The knowledge workers connect on their social media with either the Electric Works or the Workstation, or both, depending on where they base their office. All three of these groups monitor the activities of the knowledge workers, and vice versa, in order to boost their reputations. Both the Workstation and the Electric Works allow individuals to maintain a presence without actually being located in the buildings for work purposes. This presence allows a tenant to use the address for business contact purposes, which boosts their image as an established, creative professional. Meanwhile, the Workstation and the Electric Works seek to portray a similar image as a centre of an innovative, vibrant workspace with a diverse base. Both of these images connect strongly with bridging capital the tie has the capacity to convey resources of information of value – it does not always do so. The ties on social media between knowledge workers and the workspaces transmit information about reputation, status and credibility. These ties serve as proxies for closeness, when in reality little direct interaction takes place between the institutions and the workers. Both try to leverage the reputation of the other in a situational, networked manner. These ties capitalize on the bridging ties between the institutions which support their employment needs: workspaces, Sheffield City Council, the Electric Works, “All Things Sheffield” and the Workstation.

The selective presentation, as seen in Figure 17, of a desired self-image online also helps the knowledge workers develop their relational ties with colleagues and their working environment. It allows them to cultivate a personal image and brand. This is particularly true to their relational tie with the category that I have called, “All things Sheffield”. This two-way directional, positive tie allows local, distinctively Sheffield brands to connect with knowledge workers and vice versa. These brands portrayed a cultural institution important to the City’s identity such as Heeley City Farm, Our Cow Molly, Warp Films, the Arctic Monkeys or the Crucible Theatre to name a few.

There are also social media followers, or people who they are weakly linked with, who idly watch for interesting content in the background. These followers connect with a lot of people, sometimes they merely represent ‘bots’. The question is whether bots allow a user to garner social capital. The perceived accumulation of a ‘crowd of followers’ signifies an amplified presence. While it does not offer any possibility for bonding capital, it does give the impression of bridging capital where an individual denotes part of his/her digital identity to an entity and goes through the motions of interpersonal interactivity without actually engaging in such.

The knowledge worker ties with colleagues, both junior and senior, is generally strong. While the relational ties appear strong, there tends to be a lack of listening and validation where a negative relational tie is indicated. In these cases, peer networks foster a hierarchical structure where visibility is present, but not voice. This dynamic generates tension within a network, and the work environment. When a group’s voice tries to be two-directional, the group with higher status notices the presence, but does not listen or validate the needs of their junior colleagues. This was observed during the interviews with knowledge workers who described advocating for organizational changes using Facebook accounts to galvanize peer colleagues. Although, it was observed on Facebook by senior colleagues and managers, it was not commented upon. This gives the impression that what was expressed lacks value, or the content of which is not deemed important yet.

## Social structure analysis: Elites

The elites interactivity profile shows a strong correlation with networking & engagement and representation and identity activities on social media. This profile indicates that the technology and data linkages interactivity category does not feature prominently in how they view their social media behaviour. While they are as reliant on the technology as the other cohorts, technology is so ubiquitous that it causes few to no issues for this group because they have teams of people who will help them with any technical problems. As such, technology poses little problem in their lives. For the elites, technology creates another platform from which to reach out to the public.

In the graph found in Figure 18**,** the elites may be interpreted as having positive relationships with the public, global leaders, their peers, the government, and institutions they come in contact with as part of their positions as represented by the green directional arrows to indicate whether the relationship exists as one or two-ways. This is because elites cultivate these relationships as part of their position. Tensions exist between elites and regional bodies in the area simply because both do not understand their relationship and neither wants to validate the other. This is why the tie is shown in yellow with a two-directional arrow.

In general, they perceive their ties with those that they are connected to on social media as positive. For the elites, they seek to portray an authentic version of themselves. This means for EL6, it is about being open and validating her Town’s experiences online; thus representing herself as a person rooted in a place and motivated by specific values. Her values are expressed and conveyed through her social media. Lastly, as NGOs, charities, and third sector organizations may not have a direct relationship with an elite, they tend to band together and advocate for each other which is why the tie is shown as green and connecting these actors together in Figure 18.

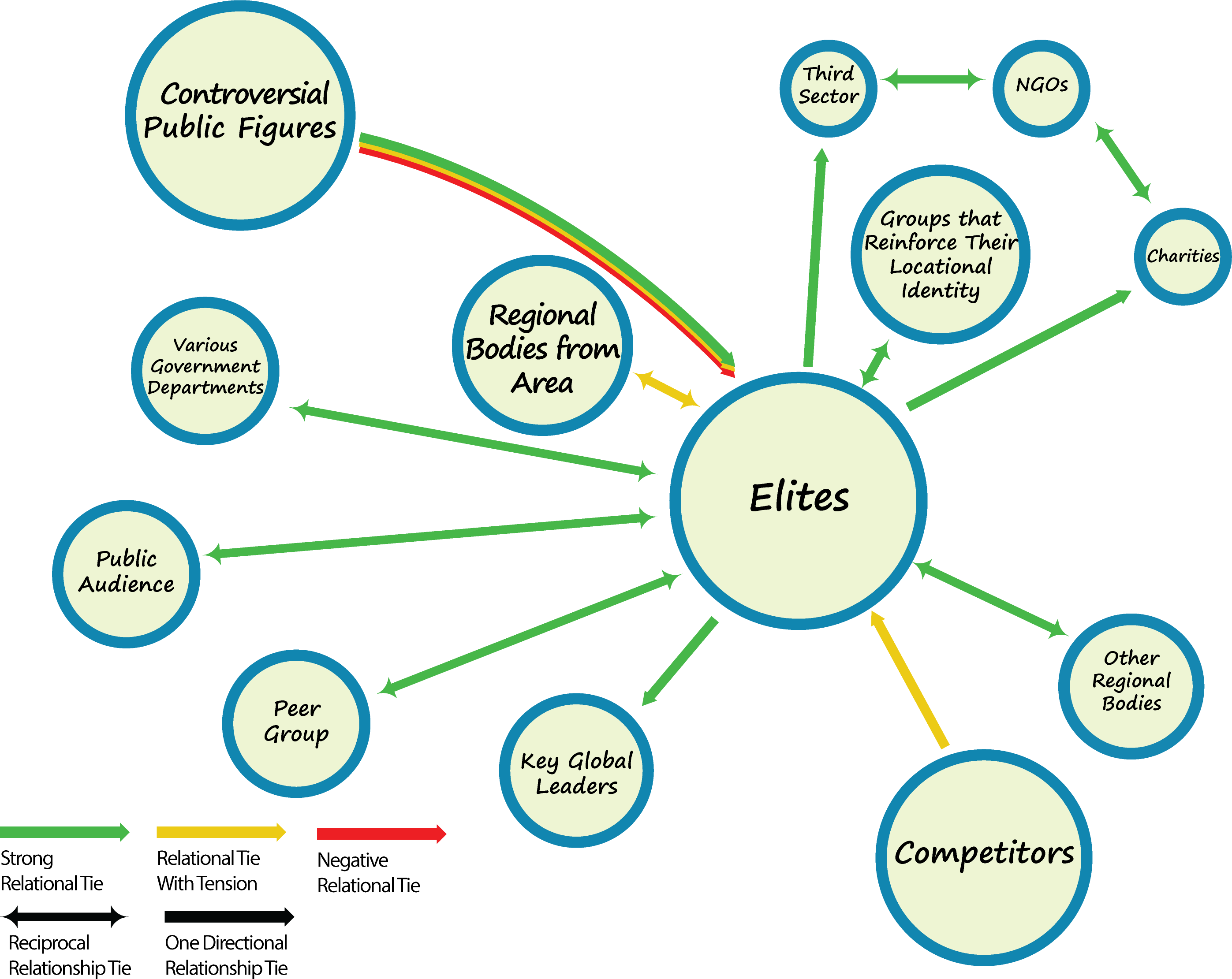


Figure 18: Social Structure Analysis of Elites - The relational ties and relationships elites have which reinforce their social position.

Elite connections occur in a one directional relationship with most of their social media connections. There is a lot of one-way connections with the elites, and the relationships between ties are not as transactional on social media as with the knowledge workers and learners because the elite strives to maintain a specific public persona which, in their minds, requires some dissociation from their private self as shown in Figure 18. In this instance, social media ties exist to supplement their presence in the public sphere and uphold their image which is why elites strive to maintain strong ties with a variety of institutional actors. Many of the elites used it strategically with the exception of the City and industry leaders who strove to appear as human and relatable as possible. The MPs who participated in this research, on the other hand, used it as a communications platform for their constituents, the communities they represented, and wider party supporters across the UK. Lastly, one of the elites used social media as platform from which to demonstrate his expertise.

This type of usage aligns well with the thought leader and influencer role. This notion consists of two motivations the desire to: 1) enhance the value of expertise to a wider audience; and 2) becoming a credible public authority on a topic. Unlike the MP’s public presence, the thought leader actively espouses their beliefs and links them with their actions. Like a knowledge worker, elites who showcases their expertise, generate content to boost their online presence. The influencer role conveys to the public a sense of authority on a particular topic of conversation and is loquacious. The network ties fostered by an elite aiming to be a media thought leader are based on niche subject areas relevant to the person’s expertise. This type of leaders uses their existing contacts to leverage a media presence. For example, EL7 represents an ideal version of the expert elite. His social media presence on Twitter is based on his job as an IT global infrastructure master. He consults with European governments regularly on industry trends and policy directions. When he started his Twitter profile in 2010, he immediately connected with industry leaders, other tech gurus, MPs and Members of the House of Lords with whom he had previously worked. His audience also grew to incorporate people worldwide interested in technology industry trends. The majority of his ties represent bridging social capital while a minority, from his in person contact list, consist of other well-regarded elites. His presence serves as a status booster for his audience to him as the tie gives the perception that one is open to absorbing new information, a trait highly prized, and often boasted of by knowledge workers. It also connects EL7 with a peer group of other elites. Social media makes these previously intangible connections visible to the public for the first time. This new visibility on social media allowed EL7’s network to grow quickly. On the other hand, the growth of ties inhibited the dyadic tie validation that occurs more often in smaller, peer-to-peer networks.

The validation of both voice and visibility acts as a filter for delineating public sentiment toward a subject. One of the MPs tweeted in favour of women in science during the timeframe in which she was interviewed. When asked about this, she noticed that it had been shared by both men and women in her audience with approximately 50 shares in a twenty-four-hour period. This gives her the impression that her audience, and perhaps her constituents, agree with her work in this area. This process of posting and sharing bring both visibility and voice because people will read it and respond. The retweets add to the validation the original poster received. As the retweets spread through a diverse network of followers that the poster does not know personally, but tends to represent political supporters. This converts to leveraging bridging social capital resources through the ties (diverse network of followers).

As the social media serves to amplify their in-person, public presence, the MPs try to maintain an authentic, purposely crafted image of themselves online. It might differ dramatically from who they are in private – this was not clear in the interviews and an interesting point. In a sense, it appears the public has tired of a well-crafted political image where the ties between all of the party supporters are homophilic in nature. In other words, the MPs stay on point when responding to a particular issue. On the other hand, the City leaders sought to be more authentic with their image to show that there is a human being here. MPs perhaps do not have that luxury and can only add a smattering of authenticity to their communication channels. MPs lost the ability to be themselves in the public realm and their relational ties reflect this. For instance, while their relational ties reflect personal values and important media connections, they do not give an impression of the person behind the façade. The real MP does not exist in the public sphere. I looked who David Cameron follows on Twitter. He has 391 relational ties which are visible. They include foreign elites like Hillary Clinton and Bill Gates, numerous UK journalists and media outlets, well-known British personalities like Davina McCall and Gary Lineker, several charities, well-known British athletes, and a bevy of politicians both Labour and Conservative parties. He only reciprocates a following with people or organizations with whom he has a good relationship and he knows will not cause any shocks to the public. In turn, these ties reinforce his cultivated identity. David Cameron also has 1.8 million followers who presumably like to see his posts in their feed. One of the MPs interviewed for this research has about 16,000 followers and follows 2,000. This level of profile traffic probably represents a national-level political norm, rather than a name that has some global recognition like David Cameron. This indicates that someone with global recognition, like David Cameron, distances himself from more local ties and instead aligns with an associational form of bonding ties. He does not need to cultivate a bridging network as this happens naturally among the 1.8 million followers.

While MPs will not formally link to some more controversial figures on social media. However, several of them reported that they monitor their activity nonetheless. One of the MPs, for instance, mentioned reading George Galloway’s Twitter feed. Although to be formally tied with him in a reciprocal social media connection would be damaging to his reputation. The MP, instead, reads Galloway’s feed several days a week and explained it as “better the devil you know than the devil you don’t”. This is why Figure 18depicts a relational tie in multi-colour form, flowing one way, between an elite and someone deemed a controversial public figure. At one time, a politician would be able to more easily monitor another through traditional media channels. As the number of media platforms has increased, and the relational ties are visible to everyone online, it could damage the MP’s reputation, or the public could question their values, if such ties appeared to exist.

## Social media ties and structural holes

As the visibility and vocal components of social media ties continue to grow, so too does their complexity in society. While the terms bridging and bonding nicely summarise some of the relationships learners, knowledge workers and elites have with each other. They do not provide context to the relationships in a transactional sense. On the other hand, they do lead to relationship processes on social media being compressed into relationships that sometimes subsist on the validation of presence – not just active listening. Listening increases understanding of the wider context, but the value of a media presence lies in its ability to present opportunities for validation, not just voice and visibility.

For computer learners, their social media networks do not extend to include colleagues or peers. Therefore, these connections, which may be present in their daily lives, cannot be leveraged. Further, for those who do not work, these social networks do not exist at all. This highlights the nature of the growing divide between learners who are caught between first and second levels, where access and meaningful use continue to be an issue, and those who represent third and fourth levels. As such, learners are forced to connect primarily with institutions for their survival. Meanwhile the notion of forming a bridging network feels unnatural to the learners, yet they are forced to develop bridging capitals with institutions. Not only does this feel foreign to them, it forms a relational tie infused with dyadic tension.

Bridging capital proliferates among the knowledge workers and elites and this benefits them in a variety of political and economic ways. Albeit bridging social capital is considered weak and a poor performing resource, its volume can leverage true social capital bonding ties and allow a validated presence to spring forth. As a result, their network structures rarely overlap with knowledge workers and/or elites. Thus, the transfer of knowledge, information or resources cannot occur through this channel. This also results in either or both of these two groups to assume the role of voice and visibility for the learners on issues of importance.

The digital economy appears to prefer the unmaking and the remaking of reputation and status simultaneously. This activity rests as a by-product of those whose skills reside between the third and fourth levels because it occurs among those who are Connected and Engaged, and on the verge of being Insightful Users. The structural hole occurs when the learners do not connect and engage with anyone on the periphery of their social circle. This prevents them from proceeding to the next level of usage otherwise known as the 3rd Level. This seems to occur because the learners are socially isolated from peers and knowledge workers. In addition, when the learners do have jobs, it is usually for only part time work which precludes them from establishing stronger ties with peers and colleagues. One learner, a Yemeni immigrant, worked at Asda. For her, working as a cashier at Asda was only a job where she worked two days a week. While she had some friends at Asda who also immigrated around the same timeframe, she did not know or socialize with peers who may work for other supermarkets. This insular network of ties, while strong, does nothing to bridge connections to increase circulating information among her social group which may lead to further job opportunities, or better understanding of comparable wages, hours or benefits.

## Social Structure and the Digital Divide

Affective relational ties overloaded with tension appear among the computer learners who are at the first level of the divide. The learners only maintain ties which feel safe with TARA leaders, HDT and their friends and family. All online interactions which require basic form filling for jobs and shopping, or even contacting their local councillor feel like it occurs in a void. The negative ties experiences between learners, Sheffield Council and their Local Councillors are affected by stress and a poor relationship. This discourages the learners to interact with Government on any level, thus effectively depriving them of their democratic voice. The shifting nature of policies also exacerbates the situation. Government, both local and national, need to be aware of who contacts them about issues, and perhaps how difficult a barrier this is to overcome for people living in social housing. Not many people will reach out to a government or representative institution for help with an issue once that trust has been broken. Trust has been broken and the digital divide continues to grow.

For knowledge workers and elites, the relationship has not disintegrated and trust remains. On the other hand, their basic needs are being met. These groups have unfettered access to their workplace, colleagues, and other democratic and economic spheres that matter. These locations also allow them access to people who provide bridging forms of social capital relevant to disseminating generated content through a network. All of these social structures provide both knowledge workers and elites a stronger possibility of recognition of their causes precisely because their relationships are not fractured. Computer learners, by contrast, do not enjoy a reciprocal relationship with any governmental department that would wish to bring attention to their problems.

CHAPTER 9: ADVANCING THE THEORY OF RECOGNITION AND THE DIGITAL DIVIDE

I will now switch to this Chapter which features an illustrative piece produced by archiving tweets concerning the #bedroomtax issue. This chapter is entirely experimental and serves as a snapshot of a specific time period. It brings together intertwined issues of the proposed welfare reform, which greatly impact the cohort of learners and social media coverage. The #bedroomtax tweet phenomena occurred in March 2013. Tweets opposing the welfare reform proposed by the Tory-Liberal Democrat coalition government used the hashtag link: #bedroomtax. The penalty for empty bedrooms has been characterised by the media as the ‘Bedroom Tax’. Simply because those that rent housing from the government must pay a tax on any unoccupied bedroom based on household size. Recognition in this case involves not only a protest against welfare reforms and austerity. The protesters want the news media, central government, the public and other social media users to recognize the gravity of the situation. Maybe the protesters want to also change the situation, but in reality, it is about multiple publics simultaneously recognizing the housing plight among some of the most vulnerable populations in England. Recognition in this instance seeks validation of potential suffering, the need for survival, and the break-up of existing communities. In short, recognition is sought on the human price a group faces.

The ‘bedroom tax’ constitutes the limitation of housing benefit payments to working-age households in social rented accommodation. They are set at a level reflecting the number of bedrooms needed to house tenants with defined age and household composition in 2013/2014. There are a raft of other welfare reforms that also impact this population substantially to include: a local housing allowance, a housing benefit cap, a council tax benefit, disability living allowance, incapacity benefits, child benefits, tax credits and non-dependent deduction. Beatty (2014: 69) concluded that the ‘bedroom tax’ impacts 660,000 households with an estimated net loss of £490 million over the course of a year.

It became clear during the interview process that the community leadership regarded the proposed changes as a violation of their human rights. It broke an existing social pact between the state and those dependent on it. A TARA leader stated that ‘they (the government) don’t see how it is for a single parent of two little kids – what it’s like to struggle on the dole money. And now they have to pay a bedroom tax. Why do they want to take that home away from us?’ Each time the welfare system reforms, it is seen as essentially breaking and re-writing an existing social pact. The housing benefit change came into force in April 2013. Three study participants, all of whom are TARA leaders, brought up the ‘bedroom tax’ issue. It does not introduce a new, direct tax. Rather, it penalises the under-occupancy of existing housing. This reform clearly affected TARA leaders: one stated that, ‘I want to find a new house because I have one extra bedroom’. Another said that the proposed welfare changes would affect greatly them – particularly their ability to organise as a group. In the past, older TARA members could ‘get a one bedroom flat for a nominal rent and just really pay the electric to have a room to use as a hub. Because of the high waiting list for property in Sheffield, we can’t do that anymore. And one of the TARAs is coming out of their council property and moving into a community building to give the property back. …If we wanted to rent a shop or something to use for that, we could, but we don’t think we’d use it to capacity as a TARA’.

I now turn to the intertwined issues of the proposed welfare reform, which greatly affect the cohort of learners and social media coverage. Tweets were posted throughout the UK, but I captured the tweets during the week beginning March 11, 2013 using Tweet Archivist. However, I selected Wednesday, March 18, 2013 as a random day to analyse the distribution of tweet concentrations of activity in the Sheffield region. This consisted of approximately 3,700 tweets that day. The visualization indicates clusters of Twitter activity in Sheffield. None of the clusters occur in any of Sheffield’s social housing communities. A snapshot of the most popular retweets protesting the welfare reforms include:

**It assumes that no person on housing benefit should ever have even minor luxuries #bedroomtax**

**@BedTax: Please Retweet this if you are Opposed to the #BedroomTax. (cc. @David\_Cameron)**

**yesterday was my first protest but it definetly won't be my last as you can see I did my bit #bedroomtax**

**Protest outside #sheffield town hall against #bedroomtax. We have joined it from big unite the resistance conference!**

**can you intro @David\_Cameron to Margaret - Sheffield Against the #BedroomTax**

**Its timely for a big #BedroomTax protest in London on the 30th March. #Momentum**

Note the number of retweets directed at the Prime Minister David Cameron. The Prime Minister did not respond directly to any of these tweets or retweets with the public. The only tweet vaguely hinting at welfare reforms from during that period include:

[Apr 3](https://twitter.com/David_Cameron/status/319411833213710336)

Big changes to tax and benefits system this month to help nine out of ten families - this is a Govt [#forhardworkingpeople](https://twitter.com/search?q=%23forhardworkingpeople&src=hash)

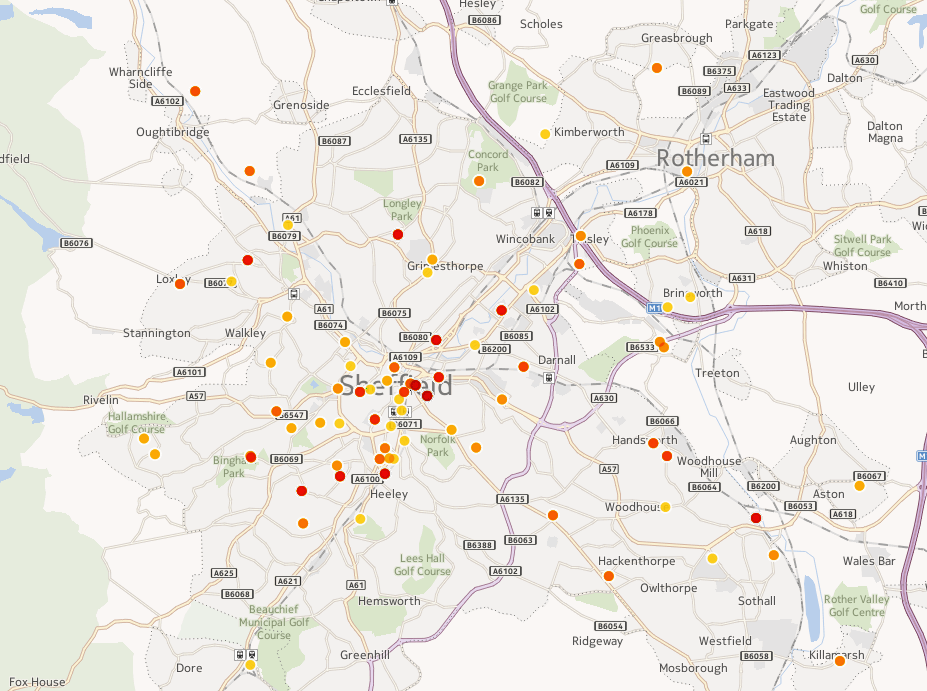
[Collapse](https://twitter.com/David_Cameron/status/319411833213710336)

* RETWEETS**181**
* FAVORITES**76**

12:31 PM - 3 Apr 2013

Demonstrators protested against the bedroom tax at over sixty locations throughout the UK starting from March until September 2013. In Sheffield, it was estimated that 6,000 residents would be affected by this and would either have to move to a smaller residence or pay more rent to the Government. In addition, their local property tax bill would increase to twenty-three percent of the full amount.

Figure 19, on the next page, depicts the highest concentrations of tweets in Sheffield protesting the #bedroomtax.



**Legend**

* 1000 or more tweets
* 500-999 tweets
* 200-499 tweets
* 100-199 tweets

**Figure 19: #bedroomtax tweet concentrated clusters in Sheffield for the months of March-April 2013**

## Tweet Map Methodology

Tweets normally disappear from availability through twitter after a period of time based on the volume of tweets made by a particular person. Without utilisation of an archive service, they can be unreliable to capture in real time. I subscribed to the Tweet Archivist service (www.tweetarchivist.com) for several months as I experimented with the hashtags that I planned to analyse and map to analyse any patterns of geographical significance. Tweets were collected and archived March 11, 2013 through April 11, 2013 using the hashtags #bedroomtax and the word “Sheffield” or #Sheffield. At first, I tried to collect only #sheffield tweets, but this was expanded given the collective voices making the national news in demonstration of the #bedroomtax. The Tweet Archivist collects tweets with given hashtag parameters. Over the period of the month, Tweet Archivist accumulated 1,056,789 tweets. Of these, only 27,589 used were geo-located and these are mapped in Figure 19. Only those tweets which were made from devices and accounts with geo-tagging enabled will record their geo-location parameters. The map was generated using CartoDB in 2014.

## Recognition for whom?

There have been similar maps which have been used to draw attention to protests across the globe. For instance, the Arab Spring set off a tweet storm across northern Africa, Syria, Jordan as well as other Arabic countries. The Bartlett Centre for Advanced Spatial Analysis also conducted a similar experiment mapping the tweet activity around London in 2011. They were able to produce a map roughly demonstrating the spatial configuration of London, illustrating its morphology including its the surrounding suburbs. It also showed that the area around Soho served as the epicentre of the tweet clusters.

This tweet map, however, indicates the geographic distribution of Twitter interactivity is present in the city centre and along the railway lines. None of these clusters represent any of the locations visited among the computer learners. There were no protests against the bedroom tax reforms in the communities where I visited the learners. Interestingly, many of the tweet clusters were found along transport lines: train, light rail and bus routes. Some clusters exist outside of this, predominantly on the western side of the city, which is more affluent. Only one, small, social housing estate is located in the western part of the City. This suggests that the tweets came from people living outside of the computer learner’s communities. While this is unsurprising, one wonders who is actually protesting this policy change? It could represent friends and family on behalf of others, or someone who dislikes the policy change. Does it represent a lack of voice on the part of the social housing residents? No. It shows that the people who are tweeting and protesting these welfare changes online via social media do not constitute the people who are being affected by the austerity measures. At the same time, social housing residents are desperate to bring visibility to their issues – they want the recognition and attention that social media brings. Social housing leaders, however, lack the skills, a sense of permission, sustained access and the media savvy necessary to share their stories online. Social media reciprocity has no chance without relational ties. Therefore, there is little possibility of recognizing the housing situation from a learners’ perspective.

When taking a look at the tweets used and compare it with the levels and skills associated with the digital divide, one may conclude that tweeters fall into the Connected & Engaged category and have reached the third level referenced on page 63**.** This shows a further disconnect between the computer learners who are moving from the digitally deprived level into the early levels of Internet adoption whereby they open a Facebook account and connect with family and some close friends. In addition, the tweeters hope to reach the top one percent of those on the social media skill bell curve, as seen on page 74, also known as the Influencers and Thought Leaders. One may only reach them through a network of bridging connections that spread the message.

CHAPTER 10: CONCLUSIONS ON SOCIETAL RECOGNITION AND INTERACTIVITY

This Chapter weaves together the original research aims and questions to tie them with both the Interactivity Spectra and Interactivity Framework, as found on pages 97 and 86 respectively. The Interactivity Spectra between each cohort will be contrasted, highlighting each’s strengths and differences. I will then delve into recommendations for learners and Heeley Development Trust to help them foster greater trust and reciprocity online with a focus on bridging capital. Lastly, I will present my final thoughts with regard to digital divide research and community interactivity.

Individuals and, by extension, community social media interactivity clearly affects the ability to accumulate and use social capital. This research linked how people use social media with a five-point spectra that highlights the meaning of both representation and networking as key factors in social capital accumulation. This extends to the ability to use social capital effectively as well through both bonding and bridging ties. Representation and identity fosters trust in a group, institution or person, as something which represents certain values or ideals. This features prominently in the development of reputation and trust. Networking and engagement therefore become significant to the spread of representation and idea within and outside a specific network. The spreadability is not solely determined by the size or scope of a network, rather it is also influenced by the mark or brand which has been generated through trust. The spectra links with voice and visibility from the interactivity framework, at this point in the research when trust, reputation converge through voice and visibility to produce a presence. Recognition follows presence. In this way, the framework and the spectra complement each other.

Social media affects the way networks and connections are formed within and among each of the cohorts. Knowledge workers and elites approach bridging ties as necessary to the practice of building links, followers and friends online. This practice is largely transparent online, and closely monitored within competing social spheres. However, offline network-building relationships and practices are only sometimes presented to a larger audience. This way of engaging with multiple social groups simultaneously appears uncomfortable for learners. The way it is approached online differs slightly from offline networking relationships for both elites and professionals. While learners may be more transparent about their friendship groups than elites, reciprocity occurs within a much wider scope for elites. In addition, technical issues (as represented in Figure 16), involving ancillary services such as shopping, serve as more of a barrier to learners. This greatly impedes their ability to seamlessly incorporate online and offline networking behaviours into their lives in the same way as elites and knowledge professionals. Learners’ perceived community belonging is also greatly threatened by the #bedroomtax. It threatens not just overall neighbourhood cohesion, but importantly their identity and ability to offer representation online or offline. The trust and support one needs to maintain and build off relationships is therefore challenged and in constant flux. Trust is required to build bridging ties and this cannot happen as long as learner communities are simultaneously ignored and force into transition.

Consequently, bonding social capital is more convenient, comfortable and limiting online. Social media, however, provides a platform that allows voice and visibility to prevail across both bonding and bridging ties, thereby amplification of a message occurs. The dual effect of voice and visibility remains privileged and exclusionary to all but professionals and elites in Sheffield.

Social media also has some affect how networks are structured among Sheffield’s residents. In addition, how networks are structured is a direct result of how institutional actors operate. In Chapter 8, there was much discussion pertaining to various actors present with the cohorts’ economic sphere. For learners, this includes governmental and third sector institutions playing a pivotal role in their survival. Relationships are strained between learners and the governmental bodies. Trust is lacking on either side. At the same time, learners are beginning to incorporate social media into their lives and link with close friends and family. Meanwhile, cities and governmental entities seek to develop a web presence. Neither institutions or learners link to each other as the institution expects followers to come to them and learners expect reciprocity of relationships to extend to social media. There remains an impasse.

Elites and knowledge workers proceed with business as usual where professionals monitor and follow elites. The elites, meanwhile, gauge sentiment in the social media sphere, their influence and each other. All of these actions are dependent upon the actors who exist in the periphery of their social structure. The social structures of knowledge workers and elites primarily rely on other people, peer groups, colleagues, and the acceptance of people from specific governmental actors such as the Council members. Sentiment is gauged between network actors which allows knowledge workers and elites to make informed decisions about their work life. Learners exist in a void, completely dependent on aid from the government and, while they are able to gauge governmental sentiment toward issues that affect them, there is little information exchange which could be used to enhance decision-making on their part. Social structures are built on reciprocal relationships which exist with information sharing and exchanges. Those with learners exist between whole governmental departments, and not specific people, which disadvantages their position in the structure. Social media interactivity, however, among knowledge professionals and elites fosters their bridging ties and strengthens their ability to make informed decisions.

In terms of digital literacies, the cohorts represent nearly the entire spectrum of interactivities and levels of the digital divide. One of the research questions asks how social media affects the way that digital literacy and social capital intersect through the activation of presence. The concept of digital literacy must account for a combination of both the Interactivity Framework and the Spectra for all three groups. It also refers to the bell curve introduced in Chapter 2 on page 74. The levels of the divide not only refer to access and adoption of the Internet, it also clearly delineates corresponding skill sets. The third and fourth levels are predicated not only on connecting, engagement and insightful users – they also rely on the ability of a user to make decisions based on those three essential characteristics. This returns back to the Interactivity Framework and what skills allow a user to filter from the step of social capital to the creation of presence.

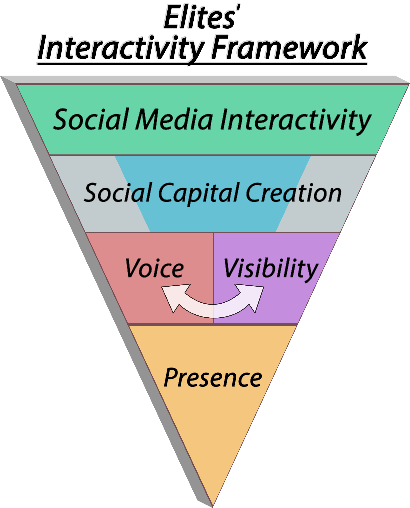
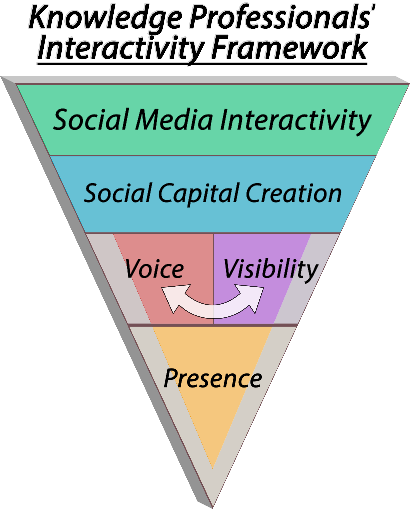
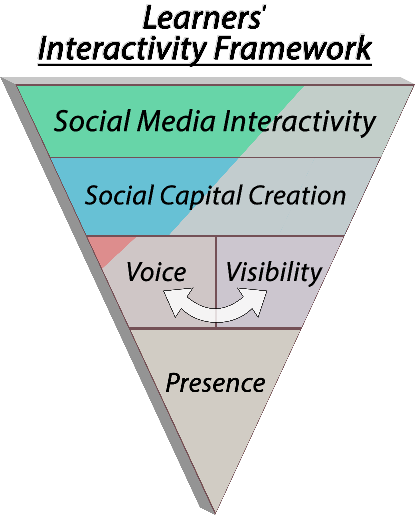


Figure 20: Interactivity Framework for all three cohorts side-by-side

Digital literacy, for all three groups, is perpetuated by the development of voice, visibility, being connected and engaged and the social structure within one operates on an economic level. That constitutes the wider contribution of this research. Media theory found its way into the development of the Interactivity Framework and when all three groups are compared in terms of the manifestation of voice and visibility online, one may draw interesting conclusions. Knowledge professionals’ framework capitalizes on the creation of capital which propels the manifestation of voice, visibility and presence. Elites focus predominantly on interactivity to produce a presence. This highlights how deftly each group utilises sentiment and insights. I will then explain how this constitutes a skill set consist with the 3rd and 4th levels of the digital divide. Presence gives one a sense, like Facebook, of who, when and where. This sense is the ability to use and parse through information. Social media platforms are designed around information flows. The ability to synthesize information also serves as a demarcation to empowerment. It relates to Rheingold’s (2014) fundamental digital literacies: attention, participation, critical analysis of information and network smarts. The formation of presence refines these literacies espoused by Rheingold (2014).

Elites maintain a strong presence, not because they focus on the creation of social capital, but because they are able to employ others who serve as content kings (Lee 2013), thereby become gatekeepers to information. There is also an element of pervasive awareness in how information flows occur among and between elites because their staff monitor social media at this level. Again, this constitutes a very high level of skill and represents the 4th level of literacy.

The absence of what Knapp’s identifies as important to relational ties such as status, psychological ownership and belonging exposes a recognition void. Without these three traits, a community or individual would find it nearly impossible to draw attention to an issue or problem. For now, social media platforms benefit from a form of exclusivity simply because computer learners and other social housing residents do not know how to cultivate the right voice and visibility to gain recognition.

The value placed, along with skill levels for each forms of interactivity is delineated in the spectra diagram below, Figure 21. It reveals that Tech and Data Linkages are important to all three groups, but it is the learner’s highest category. This indicates just how important the access issue to affordable networks, training and computers remains among learners. Sociability is also most prized among the computer learners. This research has laid bare the contemporary complexities and nuances faced by the public as it struggles for recognition in an increasingly amplified world.

Figure 21: Comparative Spectra of Learners, Knowledge workers and Elites

The overall aim of this research, as outlined in Chapter 3, was to understand how social media interactivity affects the ability to accumulate and use social capital, and whether the role voice and visibility have an impact. Similarly, networking and engagement, representation and pervasive awareness categories are strongly present among the knowledge workers and elites, but not the computer learners. The strong presence of these three forms of interactivity among professionals and elites suggests a gap in two categories that matter the most in one’s ability to be recognized: networking and representation. In fact, voice may correspond well with the networking and engagement category while visibility hinges on representation and identity. Sociability remains important, but appears to be shrinking in prominence, particularly among elites.

The exception to this are the digitally deprived who do not wish to further their skills. Knowledge workers and elites dominate the third and fourth levels depending on their age, career level and future aspirations. Their interactivity profiles hover around networking and representation, which aligns well with connected and engaged. The digital divide bell curve, however, does not adequately represent issues of representation and identity, which are key components to the use of social media platforms. This also figures prominently into the concept of recognition.

One of the problems with achieving recognition is its contingency on the platform architecture design, along with both the aggregation and amplification of network effects across the spectrum. This dynamic, which is not seen by the computer learners who are poised between the first and second levels, effectively leaves them behind. Computer learners want to be a part of modern society, and they make great strides in that area, however, they are not fully aware how this society functions particularly as it relates to recognition in the public and economic spheres. Somehow this gap must be bridged which focuses on online networks, using their voice and how to maintain some level of visibility as a community. In short, education focusing on presence for those who have achieved meaningful use is the next step in achieving key literacy skills which make an impact to be heard and seen. One may argue that an employed machinist does not require this level of economic voice and visibility going forward. But if machinists find a policy change impacting their ability to participate democratically, or economically, this change in networked, homophilic influence becomes central to potentially changing the situation. Relational ties make the difference to being heard or seen in society currently and matter if one means to use their social capital resources. These skills represent a crucial shift in the digital age, and one not easily conveyed in the traditional digital divide notion. Not only has the digital literacy gap grown, this research sought to expand the theory to include social capital resources such as voice and visibility not yet recognized in the wider debate.

Representation and identity also emerge as a networked behaviour which emphasizes the collective. The collective then reinforces the feeling of belonging within a set group. The collective experience of belonging in the City of Sheffield, while perpetuating a shared love of the City, may also unintentionally reinforce issues of status and hierarchy. Among the computer learners and social housing residents, a group consciousness certainly exists on how they are perceived by others. This weighs on their decision to contribute their voice for fear of further societal criticism. On social media, this criticism may be brutal and amplified by the sheer cacophony of voices that contribute to its spread.

Further Research

This research asserted that a rethink of what exactly the digital divide now constitutes is necessary, with the need to more explicitly incorporate issues of inequality of recognition, influence and status. While the issue of recognition on social media has been illuminated and redistribution continues to challenge urban theorists (Fincher & Iveson 2008). The impact recognition has on social media to leverage redistribution should be investigated further.

While relational ties emerged as a key conduit to attract attention and influence from an audience, one must also question the existing importance of transactional ties to each group. Relational ties bring to light affective relationships. If all three social structural networks were combined into one, further research may begin to discern how the knowledge workers and elites benefit from less fraught relationships between themselves and institutions that prop up their economic opportunities. Indeed the stress levels associated with survival among those living in social housing should be investigated. While those living in social housing benefit greatly from the feeling of belonging to a wider community, somehow survival of voice and visibility is misplaced, and not nurtured. Rather than further research in this work, practitioners should discover work that seeks to preserve voice and visibility, that way recognition may be achieved when it matters the most. Research should also seek to develop a way to capture the data that has been ascertained qualitatively in this research to expand upon the quantitative data that measures digital divide components in communities already. This would enable decision-makers to make more strategic decisions about the future of their communities.

Final Thoughts: A Way Forward?

This research must conclude that people will continue to participate within a democratic society using their presence in media. They will continue to seek new and strategic ways to position the issues that are important to them to encourage a response from an audience. The volume will continue to amplify, and the audience will tune into the channels serve to validate their homophilic networks. Simultaneously, people will strive not only for recognition, but acknowledgement, in a media environment already teeming with others trying to accomplish the same goal. Those concerned with how urban planning practices will need to be mindful of the importance of listening and acknowledging diverse members of the public. This simple practice, particularly from an elite member of society, has the potential to not only influence the inclusiveness of society, but validate the experiences of the public. The challenge the public as it exists across the globe whether they consist of computer learners, professionals or elites has just begun. In the future consideration should be made, particularly by Government, how they see and hear people online because a record of their communications will exist for perpetuity. Importantly, how may a simple act of social validation from one group to another lead to empowerment among residents. This kind of empowerment may stretch to a feeling that self-determination is possible. Self-determination, whether real or imagined, enables people to gather strength to fight injustice. This is precisely why voice and visibility matter. It is not a question of which comes first, but how it manifests worth and self-determination.

This research identifies why social media usage is of paramount importance to the manifestation of presence online. Given the conclusions of this research, it is recommended that Heeley Development Trust operate a social media class that seeks to build on bridging capital, where learners network with each other across their respective neighbourhoods. For example, they could host several parties and ask community resident learners to mingle and talk to one another in a relaxed atmosphere. Heeley knows how to conduct these events, but it would be encouraging people to branch out from their communities and have sustained contact with people from similar neighbourhoods. As each community centre has a computer for residents to use, it is recommended that each TARA adopt a Twitter account and network with each other. Once a TARA feels comfortable, they should follow with local councilors, MPs, the Council and other local decision-makers. This will create pressure on the decision-makers to follow them in return because it is transparent. Content should be fun, sharing what the community has been up to, but also be pointed in times of crisis for TARAs. Social media classes should also teach computer learners how to create content and feel comfortable sharing it through a network with bridging ties. These changes to interactivity would score more highly on the spectrum and encourage further adoption of social media voice and visibility.

Knowledge workers, in order to generate a stronger presence, should connect with people from a variety of occupations and age groups, including nonprofessionals, on Twitter, but with whom you may share an interest. As it stands, their networks are closed and homophilic in nature. Professional networks, at the time of this research, were closed to newcomers, early career professionals, or anyone wanting to “break into” a job. Meritocracy and ability should trump existing network connections. Elites should “listen” and gauge the public more rather than rely on organizations and a cadre of connections to understand grassroots sentiment.

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APPENDIX 1: ANONYMIZED LIST OF PARTICIPANTS

|  |  |  |
| --- | --- | --- |
| **Moniker** | **Gender** | **Location of Work or Residence** |
| **LEARNERS** |  |  |
| HL1 | M | Manor Park |
| HL2 | M | Heeley |
| HL3 | F | Heeley |
| HL4 | F | Heeley |
| HL5 | F | Lower Wincobank |
| HL6 | F | Pitsmoor |
| HL7 | M | Pitsmoor |
| HL8 | F | Heeley |
| HL9 | M | Heeley |
| HL10 | F | Norwood |
| HL11 | F | Heeley |
| HL12 | M | Pitsmoor |
| HL13 | M | Shiregreen |
| HL14 | F | Pitsmoor |
| HL15 | F | Darnall |
| HL16 | F | Langsett/Walkley |
| HL17 | F | Langsett/Walkley |
| HL18 | F | Norwood |
| HL19 | F | Norwood |
| HL20 | M | Crosspool |
| HL21 | F | Norwood |
| HL22 | F | Norwood |
| HL23 | F | Norwood |
| HL24 | M | Pitsmoor |
| HL25 | F | Lower Wincobank |
| HL26 | M | Burngreave |
| HL27 | F | Westminster |
| HL28 | M | St Mary’s Gate |
| HL29 | F | St Mary’s Gate |
| HL30 | F | St Mary’s Gate |
| HL31 | M | Crosspool |
| HL32 | F | Crosspool |
| HL33 | M | Crosspool |
| HL34 | F | Darnall |
| HL35 | M | Shiregreen |
| HL36 | M | Shiregreen |
| HL37 | F | Castledene |
| **PROFESSIONALS** |  |  |
| KW1 | M | Electric Works |
| KW2 | M | Electric Works |
| KW3 | F | Electric Works |
| KW4 | F | Workstation |
| **Moniker** | **Gender** | **Location of Work or Residence** |
| KW6 | M | Workstation |
| KW7 | F | Workstation |
| KW8 | M | Workstation |
| KW9 | F | Sheffield City Centre |
| KW10 | M | Electric Works |
| KW11 | M | Workstation & Electric Works |
| KW12 | F | Sheffield Other |
| **ELITES** |  |  |
| EL1 | M | Member of Parliament |
| EL2 | F | Member of Parliament |
| EL3 | M | Member of Parliament |
| EL4 | M | Industry Executive |
| El5 | M | Senior Civil Servant |
| El6 | F | Chief Executive |
| EL7 | M | Chief Executive |

1. [https://www.onlinecentresnetwork.org/ournetwork/learning-tools 2016](https://www.onlinecentresnetwork.org/ournetwork/learning-tools%202016) [↑](#footnote-ref-1)
2. <http://www.digitalregionbroadband.co.uk/sheffield-business-broadband/> [↑](#footnote-ref-2)
3. http://www.thestar.co.uk/business/digital-region-network-sold-1-6732114 2014 [↑](#footnote-ref-3)