Agile Responses to the Tectonic shifts in the European and Global Media Landscape: innovation clusters and accelerators.

Lizzie Jackson (London South Bank University, UK, Lizzie.jackson@lsbu.ac.uk) and Michal Glowacki (University of Warsaw, Poland, michal.glowacki@id.uw.edu.pl)

ABSTRACT: This paper examines the structure of fluid media landscapes, through the clustering of creative firms in London and the emerging startup environment in Warsaw. The authors emphasise the importance of networks, collaboration and acceleration within knowledge ecologies as one indicator of the response to the tectonic shifts in the European and global media landscape. They argue that this potentially results in accelerated economic and cultural capital and also supports the need to counter the dominance of global media giants. The analysis foregrounds companies specifically organised to serve the public interest ergo public service media. We ask how such an advanced public service media (PSM 3.0) might benefit from the juxtaposition of public and private models in such agile concentrations.

1. INTRODUCTION

The rise of tectonic media giants such as Google, Amazon, and Netflix can be clearly evidence from their market dominance; some would even argue that this is even a form of global cultural imperialism. A recent briefing session to BBC alumni (Thursday 24 September, London) provided BBC-gathered evidence of the increasing economic wealth of such tectonic giants relative to non-commercial and more traditional alternatives. We argue there is a continuing need for public service media (PSM) to act as a counter to market-driven alternatives (Glowacki and Jackson, 2014). Examination of the functioning of PSMs could include changes in business models and organisational structures including partnership building and alliances. We also argue that the emergence of media clustering is a response to the rise of these tectonic giants, and this strategy might be useful for PSM's globally. Through proximity and the blending of a range of skills, specialisms, and competencies within the wider 'Creative Industries' framing, PSMs may be able to adapt with sufficient speed in order to survive. What are the differences and similarities between the established technology cluster Silicon Valley, its newer sibling, Silicon Roundabout in London, and the small emerging technology ecology of the City of Warsaw?

In this paper we investigate the overall shape of the three production ecologies by drawing together existing literature in the fields of production, management, and organisational culture. We juxtapose this with an analysis of grey literature; and management and government reports. The Silicon Valley model is being treated here as a point of departure or a referent against which the other two are deconstructed. We argue that the clustering of symbiotic firms, together with the presence of agents of acceleration, appears to be a significant indicator of potential economic, but also cultural, growth. For clarity we use the term 'accelerator' to refer to sources of enterprise funding, government agencies, the research departments of universities, and socio-cultural movements able to support the growth of small to medium sized businesses.

2. THE CONSEQUENCES OF POWER SHIFTS FOR CONTEMPORARY MEDIA

For media firms largely located within nation states there is less opportunity to take advantage of fluid markets and the flocking of potential consumers, unlike Google, Facebook, Amazon Prime, and Netflix. The market dominance of these giants and resulting inequality of media power has been partly due to a lack of understanding or ability to take advantage of a media landscape capable of

facilitating market exchanges through networks and micropayment structures. This has been framed by many as a kind of cultural imperialism (Castells, 2002, Freedman, 2014:11, Lanier, 2014). Freedman (2014) acknowledges there are many complex spheres of influence operating on the media industry; political, economic, and cultural. Lanier (2014) frames the networked media landscape as being a marketplace where:

"A multitude of businesses coexist in a market, each like a species, or a mountaineer, on an imaginary landscape, each trying different routes. Increasing the number of and eccentricities of mountaineers also increases the chances of finding higher peaks that would otherwise remain undiscovered" (Lanier, 2014: 139).

The larger global media firms such as Netflix, Amazon Prime, and YouTube situate themselves within clusters of small to medium-sized businesses worldwide that they have acquired. They are creating virtual innovation clusters that enable them to have agility and to expand in a variety of directions to suit market conditions. This future-proofing through high intensity research and development is possible due to the high profits they are generating through advertising revenues and market analysis data. Such data is often obtained by exchanging increased access to services for the public in return for supplying additional personal data, access to a users networks (often on Facebook or Twitter), or user purchasing preferences. For Silverstone (2007) the rise of a commercial 'mediapolis' poses questions on how to retain the quality of news necessary for the making of proper judgements within democratic societies. "New Media have got to grow, free of the stranglehold of the big-money corporations", argues Williams (2014:47). Further, the interplay between media ownership and politics means "The production of news takes place within boundaries established by official sources and dominant values" (Iyengar and Kinder, 2010:133). Thus, we argue for the continuing evolution of non-commercial alternatives that are free from constraints. We also argue that there is an *increasing* need for independent media, therefore for an agile public service media able to evolve quickly, and this may entail taking a more distributed approach (Raats and Donders, 2015) or

developing more advanced institutional models beyond a 'traditional' hierarchical, rigid corporate structure.

3. MEDIA CLUSTERS AND CREATIVE INDUSTRY ECOSYSTEMS

Considering the needs of a living, growing, ecosystem; the management thinker Arie de Geus, used the term 'ecology' to describe a 'living company' open to change and therefore able to evolve with sufficient speed to keep pace with cultural, social, political, and economic change (de Geus, 1999:160). His analysis for the global corporation Shell of the 100 companies with the most longevity worldwide, found these organisations actively facilitated the clustering of employees for the creative exchange of knowledge. There was also a tolerance for the eccentric with an – at first – seemingly mad idea and processes to assist ideas to be tested to see if they were worth adopting. We therefore propose the existence of *internal ecosystems* within organisations as being significant. What if these internal ecosystems could now become virtual or supported by computer networks?

Manovitch (2013) sees potentially new forms of media emerging from the meta-data code structures that characterise computer networks and in the sociability of online platforms. Terranova (2004) found computer code to be akin to the organic, recombinatory, structures of DNA and atoms, having biological qualities. Bolter and Grusin (2000) refer to 'new media' as being connected with processes of remediation, and Lievrouw and Livingstone (2002) also note 'new' media's recombinatory qualities. For Vitale (2014:55) all this results in "Networked Models of Value, Meaning, and Experience" resulting in a 'hyperconnected age'. The literature on being 'hyperconnected' describes clearly the characteristics of the emerging media landscape within which 'network-aware' media firms increasingly operate.

For Gillmor, (2006); Tapscott and Williams, (2006); Keen, 2007; Sonvilla-Weiss, 2010) networks facilitate prosumerism. For Henry Jenkins networks facilitate the spreading of

content (Jenkins et al., 2013). Others consider how engagers are able to 'swarm' across networks in search of content they like (Gloor, 2006; Miller, 2010). From a positivist perspective networks and media ecologies enable, crowd-thinking (Surowiecki, 2006; Leadbeater, 2008), crowd-organising (Shirky, 2008) – and of high interest to startup companies – crowdfunding. The cognitive surplus (Shirky, 2010) and consumer surplus (Brynjolfsson and Saunders, 2010) generated through these kinds of exchanges is the currency that is converted into the profit, influence, and media power of the tectonic giants.

Learning to operate within media ecosystems, we argue, is of increasingly critical importance to media firms, particularly public service media (PSM), who have acted as a counter to market-driven information, communication. Public service media is critical to the preservation of national cultural goods and highly connected to the education of children and young people (Lowe and Steemers, 2011). A recent article in a supplement dedicated to enterprise produced as part of the UK newspaper identified the need for 'staying agile for business survival' (Raconteur.com, 13 October, 2015). As PSM is often constructed as a single entity: a corporation, could innovation clustering provide a useful model going forward and if so, why?

4. DECONSTRUCTING MEDIA ECOSYSTEMS

Silicon Valley, the world's most well-known technology ecosystem developed from a post-Second World War proximity of radio hams with decommissioned communication systems, several university research departments, cheap offices, and a general climate of experimentation within a well-defined geographic location. For Piscione (2013) Silicon Valley is supported by three pillars: advancements in technology, tolerance of risk and failure, and brain-power. This is however also connected with a particular cultural attitude as "Silicon Valley is filled with people who embrace a laid-back lifestyle, manifested in casual office dress and a disdain for hierarchical communication models" (Piscione, 2013:6). The cultural capital of Silicon Valley is, she argues, of critical importance, "The secret of this type of

economy is the right mix of people, those who are risk tolerant, constantly adapting, and don't enjoy being sedentary" (Piscione, 2013:26). The question here is whether the Silicon Valley model can be replicated elsewhere?

The recent Global Startup Ecosystem Ranking (2015) indicated geography is one of the critical factors for success as proximity enables the exchange of ideas, talent, and skills. In the report Silicon Valley, New York City and Los Angeles are framed as the most advanced cities from performance, funding, talent, market reach, and startup perspective. The report also notes, however, a rapid and increased growth for start-up ecosystems in Europe. The increase is astounding; 314 per cent in comparison with other global regions since the previous Global Startup Report of 2012. London's startup ecology ranked top in the European Union indicating the Silicon Valley model is both replicable and profitable. Among other European and Middle East cities the report highlights the role of other cities including Berlin, Tel Aviv, Paris, Amsterdam, Barcelona, Brussels, Stockholm, Tallinn and Warsaw. Concurrent with this the technology magazine WIRED (2015) identified the cities with the most vibrant startup cultures as being Stockholm, Paris, Barcelona, Amsterdam, Helsinki, Moscow, Berlin, Tel Aviv, London and Istanbul.

5. CASE STUDIES: LONDON AND WARSAW IN COMPARATIVE PERSPECTIVE

In this paper we consider the differences and similarities between the established technology cluster Silicon Valley, its newer sibling, Silicon Roundabout in London, and the small emerging technology ecology of the City of Warsaw. The analysis of both cases – when set against the 'prime model' of Silicon Valley provides a robust comparative analysis of the Western vs. Eastern perspectives, mature vs. developing, and more institutionalised vs. non-institutionalised cultures. Warsaw and London are both European capitals, and they have the strongest concentration of startups in their countries. In each case we will be looking at the following parameters:

(a) Geographical (place, and buildings),
(b) Policy (at City level e.g. innovation strategies and startup support),

(c) Financial (funding, low rents),
(d) Cultural (Creative Industries outlets, Art, museums, universities, etc.),
(e) Socio-ecomomic (diversity of educated and creative young people, creative scene(s), universities, cafes/pubs, other social or societal factors?),
(f) Technological (including travel, communication, Internet speed, digital readiness etc.). *London*
London has one of the highest concentration of universities in a city globally, therefore the level of research – and increasingly collaborative research and enterprise – with industry (Highfield, 19 December, 2014). The innovation and research and development in London is therefore being supported by a number of what we are terming 'accelerators' (agents of acceleration such as government-supported think tanks, investors, research funding bodies, and training). The presence of such accelerators appears to be common in other innovation clusters, including Silicon Valley, and the City of Warsaw.

London is also one of the financial centres of the world, situated (even geographically) on the western edge of Europe and having strong links with North America. The East End of London is adjacent to the City of London, hence the financial centre. It is here that Silicon Valley, London's technology cluster, can be found with many small to medium-sized startups located near the Old Street roundabout; hence the nickname 'Silicon Roundabout'. Larger firms, such as Google are settling here, with a 'Google Campus' being build between Silicon Roundabout and St Pancras Station, where the fast trains to Europe depart.

In the industrial age the presence of power, water, and transport often indicated a suitable location for heavy engineering and manufacturing industries, in the post-industrial age the power required for digital networking appears to be opportunities for social networking (cafes/bars), the presence of sufficient accelerators, cheap office buildings (often the empty warehouses of the industrial age), fast internet connectivity, and a creative and highly informal social culture underpinned by sophisticated project management practices and agile leadership techniques. "Media Managers need to be open-minded and to resist defensive logic; keen to observe apparently unconnected concepts, ideas and technologies; and active in developing connections" notes Will et al. (2015:203).

What we are seeing in London, in common with Silicon Valley and the self-up culture of the City of Warsaw, is the blending of media and communications with other industries which are able to take advantage of computer networks for commercial and other purposes. For example, in the Silicon Roundabout area a 'Tweet Map' of the area shows a live-mapping of the knowledge-exchange between not only startups but between connected individuals who are exchanging information practically every hour, every day.
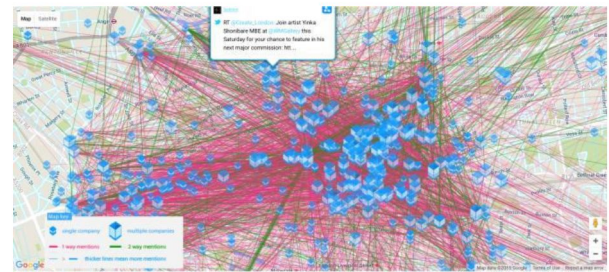
Figure 1: Live Tweet Map of 'Tech City UK' (Silicon Roundabout).

Turning to our hypothesis that the clustering of innovative firms amplifies the exchange of information, therefore the potential for adaptation and market competitiveness, we are also investigating the importance of agents of acceleration within these ecosystems. In the case of Silicon Roundabout the universities of London are encouraged to undertake research in response to calls from the UK's largest funders of business *with* technology; Innovate UK (www.gov.uk/government/organisations/innovate-uk). Innovate UK is funded by the UK Government to "fund, support and connect innovative businesses through a unique mix of people and programmes to accelerate sustainable economic growth" (InnovateUK, 2015). In addition, in terms of visibility, the government-funded accelerator TechCityUK has almost become more well-known than the area itself, with the term TechCityUK often referring to the technology cluster overall. TechCityUK was started in 2010 and it offers the development of policy, training, and networking for innovative businesses in

London (http://www.techcityuk.com). According to the accelerator there has been "a 92% increase in new digital companies incorporated by the inner city of London" between 2010 and 2013 (TechCityUK, 2015).

Warsaw

Startup ecosystems in Poland have not been the subject of systemic investigations and discussions to date. In fact, The *Polskie Startupy. Raport 2015* is the first attempt to investigate the shape and structure of startup ecosystems. No longitudinal investigation on innovation clusters from a cultural perspective has yet been conducted. According to the report there are approx. 2,400 startups in Poland with the largest number located in three cities: Warsaw, Kraków and Poznań; 28 per cent of Polish startups are located in the Polish capital, Warsaw. The majority are developing mobile, e-Commerce and Web Services. An extremely high number of startups (60 per cent) are self-funding, indicating a lack of formal infrastructure and funding. Only a small number of startups in Poland gather funding from other financial sources, for example via startup weekends (7 per cent), startup competitions (12 per cent), mentoring (12 per cent), incubators/technology partners (10 per cent) and accelerators (10 per cent) (*Polskie Startupy Report*, 2015: 26).

The Polish startup ecosystem is – however – developing rapidly although it can still be regarded as having rather low or moderate level of institutionalisation. An attempt to create an organisation capable of accelerating and quantifying startups located in the country has resulted in the development of The Startup Poland Foundation, whose goal is to:

"(...) build awareness of the great potential of startups among decision-makers, politicians and local government officials. We are ready to be a partner in talks with everyone who – like us – wants Poland to build its global position on the basis of an innovative economy, created by talented and creative young entrepreneurs" (Startup Poland, 2015a).

Draft policy documentation adopted by the Startup Poland Foundation argues there is a need for a new engine capable of supporting growth. Challenges to unlocking the potential of Poland's innovation include regulatory constraints as well as factors relating to institutional and industrial culture and the functioning of institutions (Startup Poland, 2015b).

The Polish startup landscape, from a positivist perspective, has a large number of online networks through which entrepreneurs are gathered together (see www.mamstartup.pl). In Warsaw the district of Żoliborz (ul. Bohomolca 15) offers a large building (Reaktor) for developers to work, collaborate and network. The mansion offers fast online connectivity, plus the opportunity to rent an office (or shared office space) for a meeting space, mezzanine, and a garden to work in the summer time. Reaktor also acts as an accelerator offering Open Hours every Friday for those who want to share their ideas with experts and advisors who are based there. Every month there is an Open Reaktor meeting which organizes presentations from invited speakers. A recent meeting (October 14, 2015) publicized other initiatives taking place elsewhere, such as a 'Startup Yard' acceleration programme in Prague. During the evening the *Polskie Startupy Report 2015* was presented and entrepreneurs from Belgium, India, Poland and Ukraine offered additional presentations on their own development projects and prototypes. The meeting was highly informal and closed with opportunities to network over beer and pizzas in the garage of the Reaktor building.

6. CONCLUSIONS: THE ACCELERATION OF INNOVATION AND APPROACHES TO AGILITY

The purpose of this paper has been to examine agile responses to tectonic shifts in the European and global media landscape, through the emergence of innovation clusters. We have considered the differences and similarities between the established technology cluster Silicon Valley, its newer sibling, Silicon Roundabout in London, and the small emerging technology ecology of the City of Warsaw. The three case studies have provided sufficient breadth and range to look at the differences and similarities of each media and communications ecosystem. The importance of conducting this study at this time has been in order to counter what some would argue is a form of global cultural imperialism. Our hypothesis has been that this dominance has

created an imbalance in access to critical news and information sources, also to plurality of content, and to cultural sources that are free from commodification or the effect of market forces.

We argue there is a continuing need for public service media (PSM) to act as a counter to commercial content, and that this will entail considering becoming part of an innovation cluster (Bennett et al., 2012), whether it's internal, part-internal/part-external, or involves the PSM firm relocating. The BBC relocated a proportion of its production studios to Salford in Manchester from 2002 onwards, and this was specifically to be able to take advantage of the proximity of two universities and a cluster of innovative media and creative industries occupying the same regeneration site. Known colloquially as 'the firm' the innovation cluster also has global links, for example with Carnegie Mellon University in the US. Together 'the firm' is beginning to produce innovative forms of content including serious games, augmented reality narratives to accompany television programming, and online content. We have argued that being 'hyperconnected' describes the characteristics of the emerging media landscape within which 'network-aware' media firms increasingly operate. For the tectonic giants this may be a virtual clustering through mergers with and acquisitions of innovative small to medium-sized businesses or through co-location, such as Google's intention to open a large campus next to Silicon Roundabout in London.

We have looked at three innovation clusters, Silicon Valley in the US, Silicon Roundabout in London, and the city of Warsaw's emerging startups at the edge of the city boundary. These three clusters were particularly chosen as they provide examples of a large, western, and mature ecology (Silicon Valley), a maturing European cluster (London), and a small and emerging innovation cluster. This has enabled us to look at a sufficiently wide range of clustering in order to see any similarities or differences. We have used the following parameters as a lens to examine each of the case studies: geography, policy, economic structures, cultural orientations, and socio-economic and technological factors.

We found there are similarities in the ability to draw on a much wider set of skills than the single corporate structure was able to offer.

There is a flow of staff and capacity across the clusters. Many of the firms are beginning to use more agile and informal management practices, and this can be evidenced in the social networking (on and offline) that glues the institutions together culturally. There is informality too in the style of dress, the office furniture (we refer to the accelerator sessions held at Reaktor in Warsaw, Google's offices, and in the offices of firms in Silicon Roundabout), and to the way business is conducted on the surface. At deeper levels there is more use of formal project management techniques, and a tolerance for the outsider as a potential innovator (following de Geus, 1999). There was a high level of sociability and strong links between skilled, highly motivated, young people; the average age is around 20-35 (we will be seeking more data on these parameters as our study develops). In each case there was a high presence of startups and access to emerging and 'advanced' and networked technologies. Each of the associated cities or regions were proactively promoting the innovation clusters.

In terms of the differences between our three case studies, we found the city of Warsaw lacked sufficient a policy framework to proactively support emerging innovation startups or to fully enable the clustering of media and creative industry firms. There is an emergent innovation culture situated at the periphery of the city at Reaktor, an accelerator that provides a space to work, network, and receive training and support. In the case of Silicon Valley and Silicon Roundabout there are a wide range of accelerators (university research departments, government bodies, think tanks and so on). For the city of Warsaw there are fewer opportunities to apply for funding, however this is changing as new competitions are being announced and the first ever report on Polish startups is to highlight the importance of prototyping and changing business models in front of the government officials. The location of most of the startups in Warsaw are less close to the universities, however this may not be an influencing factor, further examination is required in the near future. In Silicon Roundabout and Silicon Valley there are offices and production spaces that are being repurposed signaling the emergence of a post-industrial age. Some would suggest we are entering a fourth industrial age (Floridi, 2014) connected with

the management of Big Data which might result in the reshaping of the 'infosphere', or entering a second machine age where 'brilliant technologies' will alter how we live, work, and prosper (Brynjolfsson and McAffee, 2014). Without the presence of public service media these suggested advances may be coloured by the overwhelming ownership of news, information, and culture by 'Big Media' and the 'Internet Giants' (Williams, 2014).

According to Forbes (2015) transformations in technology are arriving faster than expected. For media firms largely located within nation states – such as public service media – there is less opportunity to take advantage of fluid markets, therefore clustering is highly likely to be useful to PSM, in order to assist the ability to evolve and counter the tectonic giants – Google, Netflix, Amazon Prime and so on, but only if they begin swiftly and find ways to work with a range of different types of media firms, ergo, the wider Creative Industries. The continuing importance of public service media is critical in order to ensure future generations have access to media, communications, and cultural goods that are not commodified but serve purposes connected with the wellbeing of the public and the democratic societies they live within.

REFERENCES:
Bennett, J, Strange, N, Kerr, P, and Medrado, A, (2012), *Multiplatforming Public Service Broadcasting: The Economic and Cultural Role of UK digital and TV Independents*, London: AHRC, Royal Holloway, University of Sussex and London Metropolitan University.

Bolter and Grusin (2000), *Remediation: Understanding New Media*, Boston, Mass: MIT Press.

Brynjolsson, E, and McAffe, A, (2014), *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*, New York and London: W W Norton and Company.

Brynjolfsson, E, and Saunders, A, (2010), *Wired for Innovation: How Information Technology Is Reshaping the Economy*, Cambridge, Massachusetts, and London, England: MIT Press.

Castells, M, (2002), *The Rise of the Network Society: The Information Age: Economy, Society and Culture*, (Second Edition), Oxford and Malden, Massachusetts: Blackwells.
De Geus, A, (1999), *The Living Company: Growth, Learning and Longevity in Business*, London: Nicholas Brealey Publishing.

Forbes (2015), *The acceleration of acceleration*, Available at: www.forbes.com/sites/stevenkotler/2015/02/06/the-acceleration-of-acceleration-how-the-future-is-arriving-far-faster-than-expected/ (Accessed 19 October, 2015).

Floridi, L, (2014), *The 4th Revolution: How the Infosphere is Reshaping Human Reality,* Oxford: Oxford University Press.

Freedman, D, (2014), *The Contradictions of Media Power,* London: Bloomsbury.

Gillmor, D, (2006), *We the Media: Grassroots Journalism by the People, For the People*, Sebastopol: O'Reilly.

Global Startup Ecosystem Ranking (2015), Compass, Available at: http://startup-ecosystem.compass.co/ser2015/ (Accessed 16 October, 2015).

Gloor, P, (2006), *Swarm Creativity: Competitive Advantage through Collaborative Innovation Networks*, Oxford: Oxford University Press.

Głowacki, M, and Jackson, L, (eds.) (2014), *Public Media Management for the Twenty-First Century: Creativity, Innovation, and Interaction,* New York and London: Routledge.

Highfield, R, (2014), *London not Oxbridge is the powerhouse of British universities*, Evening Standard, 19 December, 2014, Available at: http://www.standard.co.uk/comment/comment/roger-highfield-london-not-oxbrid... (Accessed 17 October, 2015).

InnovateUK (2015), *Home Page*, Available at: https://interact.innovateuk.org (Accessed 17 October, 2015).

Iyengar, S, and Kinder, D, (2010), *News That Matters: Television and American Opinion,*

Chicago and London: University of Chicago Press.

Jackson, L, (2015), *Conference Presentation*, IAMCR, July 2015, Montreal.

Jenkins, H, Ford, S, and Green, J, (2013), *Spreadable Media: Creating Value and Meaning in a Networked Culture*, New York: New York University Press.

Keen, A, (2007), *The Cult of the Amateur: How Today's Internet is Killing Our Culture and Assaulting Our Economy*, London and Boston: Nicholas Brealey Publishing.

Lanier, J, (2014), *Who Owns the Future?* London: Penguin Books.

Leadbeater, C, (2008), *We-Think: Mass Innovation, not Mass Production*, London: Profile Books.

Lievrouw, L, and Livingstone, S, (2002), *The Handbook of New Media*, London, Thousand Oaks, and New Delhi: Sage.

Lowe, G, and Steemers, J, (2011), 'Regaining the Initiative for Public Service Media' in *Regaining the Initiative for Public Service Media: RIPE@2011* (Lowe and Steemers, eds.), Gothenburg: Nordicom.

Manovitch, L, (2013), *Software Takes Command*, New York and London: Bloomsbury Academic.

Mauss, M, (2008), *The Gift*, (Reprinted Translation), London and New York: Routledge.

Miller, P, (2010), *Smart Swarm*, London: Collins.

Piscione, D, (2013), *Secrets of Silicon Valley. What Everyone else can learn from the innovation capital of the world*, New York: Palgrave Macmillan.

Polskie Startupy. Raport 2015 (2015), Available at: http://raport2015.startuppoland.org (Accessed 16 October, 2015).

Raats, T, and Donders, K, (2015), From centralized to distributed public service media: An analysis of market and public value driven arguments, *The International Journal of Digital television*, 6(2): 103-124.

Raconteur.net (2015) 'Staying Agile is Essential for Business Survival' in the *Enterprise Agility* newspaper supplement special edition, 13 October, 2015, London: The Times Newspaper.

Shirky, C, (2008), *Here Comes Everybody: The Power of Organizing without Organizations*, London: Allen Lane.

Shirky, C, (2010), *Cognitive Surplus: Creativity and Generosity in a Connected Age*, London: Penguin Books.

Silverstone, R, (2007), *Media and morality. The rise of the Mediapolis*, Cambridge: Polity Press.

Sonvilla-Weiss, S, (ed.) (2010), *Mashup Cultures*, New York: SpringerWein.

Surowiecki, J, (2006), *The Wisdom of Crowds: Why the Many are Smarter Than the Few*, London: Abacus Press.

Startup Poland (2015a), Available at http://startuppoland.org/en/#about (Accessed 16 October, 2015).

Startup Poland (2015b), Policy Statement, Available at http://startuppoland.org/wp-content/uploads/2014/11/StartupPoland_EN.pdf (Accessed 16 October, 2015).

Tapscott, D, and Williams, A, (2006), *Wikinomics*, London: Atlantic Books.

TechCityUK, (2015), *Home Page*, Available at: http://www.techcityuk.com (Accessed 17 October, 2015).

Terranova, T, (2004), *Network Culture: Politics for the Information Age*. London: Pluto Press.

Vitale, C, (2014), *Networkologies: A Philosophy of Networks for a Hyperconnected Age - A Manifesto*, Winchester and Washington: Zero Books.

Will, A, (2015), 'Entrepreneurial Venturing and Media Management' in *Managing Media Firms and Industries: What's So Special About Media Management?* (Lowe, G, and Brown,

C., eds.) Heidelberg, Dordrecht, New York and London: Springer.

Williams, G, (2014), *Big Media and Internet Titans. Media Ownership: The Democratic Challenge*, Nottingham: Campaign for Press and Broadcasting Freedom.

WIRED (2015), *WIRED's 100 Hottest European Startups 2015*, Available at: http://www.wired.co.uk/magazine/archive/2015/09/features/wireds-100-hottest... (Accessed 16 October, 2015).