

University of Dundee

Social Networks and Networked Institutions in Contemporary Glassmaking Careers

England, Lauren

Published in:
Making Futures

Publication date:
2015

Document Version
Publisher's PDF, also known as Version of record

[Link to publication in Discovery Research Portal](#)

Citation for published version (APA):

England, L. (2015). Social Networks and Networked Institutions in Contemporary Glassmaking Careers: A case study of University of Sunderland and National Glass Centre. In *Making Futures: craft and the (re)turn of the maker in a post-global sustainably aware society* (Vol. 4). Plymouth College of Art.

General rights

Copyright and moral rights for the publications made accessible in Discovery Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from Discovery Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain.
- You may freely distribute the URL identifying the publication in the public portal.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Social Networks and Networked Institutions in Contemporary Glassmaking Careers

A case study of University of Sunderland and National Glass Centre

By Lauren England, King's College London

Abstract

This paper aims to analyse the role of social networks as career facilitators and the network presence of higher education institutions (HEIs) within the context of contemporary glassmaking. The findings of this paper highlight the role and benefits of network participation in developing a career in glass and the importance of HEIs as network mediators. However, the threat to local glassmaking communities posed by institutional dominance of the network and its opportunities is also highlighted. The paper further concludes that limited research on the relationship between HEIs and the craft sector calls for further exploration.

Introduction

This study focuses on the role of social networks in professional glassmaking careers, and the influence of higher education institutions within such networks. Craft and glassmaking have often been overlooked (Banks 2010) both as a form of industry and contributor to the creative industries (CIs) and we have little understanding of the role of networks in craft careers. This paper aims to connect findings with established and emergent literature on networks and professional development in order to improve sector understanding.

In order to consider the relevance of social networks within glassmaking and the role of institutions in this field, this study uses a regional case study of the University of Sunderland (UoS) National Glass Centre (NGC) using qualitative interviews. Interview analysis produced findings highlighting the benefits obtained through network participation, namely access to resources and opportunities, although limitations such as increased competition and the time consuming nature of network building and maintenance also became apparent. The findings also suggest correspondence with established theories on social networks while other areas of literature were contended, suggesting a need for further research within the sector in order to establish clear ties between the wider literature and the craft sector. While this study has highlighted the importance of social networks within professional development for glass artists, it has also indicated the growing presence of institutionalised networks and the potential impact this has on local glassmakers working outside of an institutional setting. This study concludes that there is a need for further research into the development of networks and the role of institutions within a glassmaking context and the wider craft sector.

Context: glassmaking in Sunderland

As an industrial process, glassmaking gained strength in the seventeenth century, spreading throughout the UK, with hubs in industrial cities such as Sunderland and Stourbridge (England and Comunian 2015), until its decline in the twentieth century due to increasing production costs and the availability of cheap labour and imports abroad (National Glass Centre 2015a). From the 1960s onwards, glassmaking in the UK and internationally began moving away from industrial design towards developing new forms of artistic expression, led by the Studio Glass Movement pioneered in the UK by Sam Herman, an industry trained artist and educator.

The shift in glass education towards artistic practice encouraged the development of contemporary British glass as we know it today (Cummings 2005).

The first specialist undergraduate degree in glass was established by Sunderland Polytechnic (now UoS) in 1982 (Davies 2007). Today UoS is one of the largest glass HE training centres in Europe but also one of the few remaining providers in the UK following a spate of course closures and amalgamations in 2010 (Petrova 2010). NGC opened in 1998 with the vision of developing 'a glass industry for the twentyfirst century' (National Glass Centre 2015b). NGC was taken over by UoS in 2010 and aims to be a leading institution for glass research, teaching, production and exhibition (ibid.).

Outside of the University, Cohesion Glass Network, founded in 2000 as a City of Sunderland initiative, brought together practicing artists from across the UK, organising exhibitions, workshops and career development opportunities. The folding of the network in 2010-11 marked a loss of community network support for both regional and national glass artists. Nonetheless, a high number of glass makers remain in the North East, nearly all of whom have a connection with UoS (Davies 2007), illustrating the role of the university in ensuring the continuation of glassmaking in the region.

Thinking on crafts and social networks

Considering the topic of this study, it is important to note that crafts practices are inherently social and community orientated (Holroyd 2012; Metcalf 2008). Community-based knowledge sharing is also placed at the heart of craft making (Cook and Yanow 1993), influenced in particular by the high degree of tacit knowledge (Polanyi 1967) in craft skills, which requires techniques to be transferred between makers through personal interaction (Cook and Yanow 1993). The transfer of craft knowledge has typically formed around the 'master-apprentice model, where practitioners devote significant time passing on their skills to the next generation' (Boanni and Parkes 2010: 180), resulting in 'strong community ties' (Amin and Roberts 2008: 353-369). The role of social networks within craft communities can therefore be considered key to the transfer of knowledge and skills.

Recent studies have stated that networks 'play a vital role in the creative community' (Harvey et al. 2012: 534), particularly when entering precarious creative industries (CI) labour markets (Lee 2012). Comunian (2012) has also indicated the importance of networks within the creative economy of the North East, the region of this case study. Correlation between networks and professional development has also been heavily researched in non-CI (Tymon and Strumph 2003; Siebert et al. 2001) and CI careers (Ball 2003; Daskalaki 2010), particularly in relation to entrepreneurship (Zimmer 2006, Stuart and Sorenson 2005). However, much of the CIs research has focused on the media industries and despite the entrepreneurial formation of craft careers (Crafts Council 2014), craft networks have not been explored outside of marketing (Torres 2002) or a clusters (Harvey et al. 2002; Thomas et al. 2013) perspective, with little exploration of the role they play in craft careers other than an acknowledgement that 'contacts established at university [are] essential career facilitators' (Ball et al. 2010). Furthermore, the relatively small number of academic studies conducted on craft have tended to focus on rural and peripheral clusters (e.g. Cornwall; Australia) (Bell and Jayne 2010; Thomas et al. 2013). While craft is typified in this rural context, networking and cluster dynamics may be very different in inner-city communities (e.g. Sunderland).

Many established network theories such as Bourdieu's (1986) theory of Social Capital, Granovetter's (1973) weak tie theory and, Burt's (2004) theory of structural holes and Lin et al.'s (1981) social resource theory highlight the network advantages gained from network participation. Although these theories present varying and somewhat competing theories on the role of social capital and networks in career progression, they all suggest that personal connections and access to information and resources are influential in career success (Siebert et al. 2001). This has been echoed in studies on creative careers (Daskalaki 2010; Ball 2003).

The aspects of network anatomy that are of particular importance in this study are betweenness and brokerage (Gray 2015) – the ability of network actors to connect others and form bridges between different network clusters (Freeman 1977).

The advantage of brokerage positions is a further commonality between key network theories and is also found in studies on creative industry networks (Daskalaki 2010). Actors in brokerage positions can be individuals (Granovetter 1973), professional forums (Ozgen and Baron 2007) or institutions – educational (Thune 2007) or cultural (Comunian and Gilmore 2015). Higher education institutions (HEIs) in particular can be considered important brokers due to their institutional power and access to knowledge, resources and varied network ties (ibid.) .

While there are a multitude of advantages derived from network participation, there are also limitations such as network inequality (Lee 2011), social competition (Burt 2009), network lock-in (Boschma 2005) and network embeddedness (Uzzi 1996). Furthermore, while social capital and its manipulation through networks are heavily linked to career development (Comunian 2012), the applicability of established theories in reference to craft networks cannot be confirmed as such networks have been under-observed, despite an acknowledgement of their importance in early careers (Ball et al. 2010). It is therefore important to evaluate these theories in the context of glassmaking (and other crafts practices) through empirical study.

Furthermore, there has been fairly broad research into connections between institutions, industries and localities (Goddard and Vallance 2013; Chatterton and Goddard 2000), but very few of these studies have explored their impact on the creative economy. Early studies have suggested however that HEIs can have a positive impact through market awareness, providing infrastructure such as studio spaces, facilities etc, disseminating research and new techniques and by producing 'creative human capital' for the labour market (Amin and Roberts 2008).

However, Comunian and Gilmore (2015) have highlighted a potential for the considerable access to capital, resources, space and knowledge in comparison with the capacity and capability of creative industries organisations could cause unequal power relations depending on the type of relationship formed between the institution and creative organisation. Furthermore, research on craft and HE has tended to focus on student numbers (Pomegranate and TBR 2014), HE policy and research funding (Yair 2011) and income generation (Craft Council 2012).

The role of HEIs in developing local creative economies outside of their four walls (Dawson and Gilmore 2009) therefore has yet to be explored in relation to craft.

Data and Methodology

This paper builds on data collected during the summer 2015. Multiple visits took place to the University of Sunderland and local studios in the North East between May-June 2015 to conduct interviews with a seventeen artists, academics, students and non-practitioners working at the gallery, all of whom had a prior or ongoing connection with the University or NGC in order to gain in-depth insight into the community and its networks. Participants were asked about their own network participation, the impact networks have on their career and how they perceived the role of HEIs within the network. Interviews were transcribed, inductively coded and thematically analysed in order to consider their articulation of the experiences of local glassmakers and the role of the HEI within the community. Prominent and relevant themes were then selected for further analysis.

Findings

Social networks and career development

Core professional benefits of network participation that emerged through interview analysis were: access to opportunities/opportunity-information (exhibitions; employment) and resources (knowledge; equipment; techniques; funding). In particular, findings highlight networks as a means of accessing opportunity-information. Access to benefits was gained both through personal ties (mentors/tutors), informal industry networks (e.g. Cohesion) and professional forums (visiting artist workshops/talks; glass society conferences etc.) and benefits tended to be self-perpetuating, with multiple benefits derived simultaneously or subsequent opportunities arising.

Active network participation was particularly important when accessing institutional opportunities (exhibitions and residencies), supporting Daskalaki's (2010) statement that CIs predominantly rely on informal patterns of interaction and processes both in the areas of recruitment and selection of project members and knowledge sharing and that social network development and maintenance are crucial in creative career development (ibid.). It also suggests that network connections are a social resource (Lin et al. 1981) for glassmakers in that they enable instrumental action (career development) through access to opportunities and resources or actors with power to grant opportunities (curators; collectors; clients etc).

Although participants noted few drawbacks to network participation, the amount of time taken to develop and maintain network contacts was consistently highlighted as a negative. However, this was considered a minor disadvantage compared with the advantages gained.

Competition however was presented as a significant drawback, resulting from close networks, highly specialist practice and the overall small scale, tightly-knit context of the glass community; a catch-22 as this also drives network necessity. Artist-Artist competition revolved mainly around gaining opportunities while rising resource competition (Hannan 1986) between artists and institutions was associated with the increasing number of actors joining the network (through HE) and rises in production costs (studio hire; materials; energy etc). This suggests that resource competition (ibid.) is prevalent, although Burt's (2009) social competition theory is also supported in that actors are competing for the benefits derived from network relations.

Unequal power relations within the network (Comunian and Gilmore 2015) were also highlighted, weighted towards HEIs, suggesting a negative competitive relationship between HEIs and local artists working outside of the institution with the potential to limit access to development opportunities through network exclusivity (Scott 2000). Network embeddedness (Uzzi 1996) was also common within local and wider networks due to their small scale and the specialist nature of glassmaking. This increased competition by making it difficult to 'stand out' within the network and 'diluting' the offer of individual makers, indicating a benefits threshold (ibid.) and supporting the idea that long-term, in-depth engagement with specialist networks can limit career development if artists become 'locked-in' (Boschma 2005), suggesting a need for engagement in wider/alternative networks.

Findings so far have indicated strong correspondence with established theories on network advantage and disadvantage. As evidence suggests that network participation is a key facilitator in developing as a professional in glassmaking, this paper will now analyse the influence of HEIs over networks and their advantages.

Networked Institutions and Institutionalised Networks

HEIs in particular were presented as network hubs; bringing students, academics, practicing artists and curators together through conferences, links with wider network associations and residency programmes. In this case study, the gallery (NGC) also widened networks by facilitating connections with international artists. In this sense, HEIs can be seen as integral network brokers with access to a variety of connections.

Access to individuals with specialist tacit knowledge and knowledge transfer was also presented as a key feature of the HE network: specialised knowledge stored in artist/academics, research students and technical staff is transferred to students during education. Visiting artists and residency programmes also enable knowledge to flow in and out of the institution. This was seen as a valuable resource for student participants and was linked to their choice of HE provider at undergraduate and postgraduate levels, suggesting early appreciation of the benefits of gaining industry contacts.

The UoS was also depicted as a provider and mediator of opportunities through the dissemination of opportunity-information, access to other organisations and funding, and opportunities (exhibition; residency; employment; shop sales; studio spaces) at the university itself. This suggests that the network studied here is heavily influenced by the institution, although it is acknowledged that this may be due the case study location. Nevertheless, it does highlight the potential power of the HEI within this particular network and therefore their potential to support career development, particularly in students, graduates, artist/academics and artist residents.

However, interviews also highlighted a degree of disconnect between the UoS and the local glassmaking community. This was seen as particularly problematic when combined with the lack of local community support and infrastructure for glassmakers in Sunderland following the closure of Cohesion Glass Network in 2010/11. The power imbalance (Comunian and Gilmore 2015) heavily weighted in favour of the institution was then seen to discourage independent creative business through intense resource competition (Hannan 1986).

This was presented as particularly detrimental to early graduates and emerging artists and was associated with a lack of graduate retention in Sunderland; suggestions were made that practitioners were moving to other cities where more creative business support is available and less competition with institutions (UoS) for the limited pool of local opportunities. However, student retention appears to be a problem in Sunderland as a whole, not just in glassmaking (Sunderland City Council 2010).

Secondly, problems were said to arise with the institution undercutting local makers, including graduates of the university, through their access to greater and cheaper resources, and artists being 'priced out' of NGC incubator spaces. These issues are heightened by the increasing cost of creative production (materials; studio/facilities hire; energy and shipping costs), felt particularly strongly in glassmaking as an energy and labour-intensive practice.

This suggests that the dominant presence of the HEI over glassmaking in Sunderland has increased resource competition to a point where local, non-institutionally protected organisations and makers begin to suffer. This follows the predictions of Hannan's (1986) theory on organisational founding and failure and could contribute to the regional isolation of the creative industries in the NE as found by Swords and Wray (2010), although their paper was not linked directly with HEI-local economy engagement. In this study the HEI is therefore presented as both a facilitator and hinderer of professional development although further research is needed to improve understanding of this relationship, particularly with reference to HEI engagement with local supply chains, labour markets, infrastructure and capital markets (Amin and Roberts 2008).

While these findings highlight a need for greater engagement between HEIs and communities with limited cultural markets or CIs support infrastructure (affordable studio spaces; facilities; exhibition venues etc) in order to retain their creative human capital and support local creative production (Comunian and Gilmore 2015), it is noted that these issues cannot be solved by HEIs alone as they are linked to wider issues such as the precarious nature of creative employment (Gill and Pratt 2008) and the very make-up of the craft sector itself (micro businesses and sole traders). The researcher also stresses that this situation is not unique to Sunderland but a predicament faced by other regional post-industrial cities in the UK (Chapain and Comunian 2010).

Nevertheless, as the findings of this study have indicated the benefits of network participation for glassmakers at all career stages and the prominence of HEIs as network mediators, it is important to examine whether network development is encouraged during HE training as a method of developing students' and graduates' careers.

Integration of network practices within HE curricula

All participants in this study, including students, expressed the need to develop networks pre-graduation for support, access to opportunities and resources, and most crucially, for professional experience/employment. Undergraduate student participants were also aware of the need to 'meet the right people' and had actively sought to build connections with tutors and visiting artists in order to gain professional experience. Their networks were however relatively small and predominantly institutionally based, and although work experience with studio artists was seen as a strong method for external network building and career development, experience outside of the University was limited, creating a barrier to network expansion.

While evidence suggests the benefits of being networked are acknowledged, by staff and students, this study argues for greater external opportunities for network development to be encouraged and facilitated in order to improve the entrepreneurial capabilities and market awareness of students and graduates. Further research is however required to explore the provision of career management training in glassmaking and other crafts practices.

Conclusions and recommendations

By analysing network patterns and the experiences of professionals in the sector, this study concludes that network participation is integral to the professional development of glassmakers, particularly those at an early career stage, although advantages have been demonstrated at all career levels. It therefore recommends that network-development practices be integrated within HE programmes in order to enhance career potential post-graduation.

In addition to network benefits, this study has highlighted the importance of HEIs as network hubs and promoters of network opportunities within contemporary glass communities, a position of increasing significance given increased economic pressure on creative production. However, there is also an observation that the impact of institutional dominance over the network has a negative impact on local creative production by increasing resource competition (Hannan 1986), creating significant challenges for non-institutionally based makers in sustaining or developing their creative practice. This is particularly prominent in localities such as Sunderland where support infrastructure outside of the institution is limited.

As HEIs are presented here as both facilitators and hinderers of networks and the professional development of glassmakers, we must question how HEIs can simultaneously support their local creative economies and their own performance within a competitive education market. There is also a need for further empirical and theoretical research to ascertain the full impact of institutionalised knowledge and institutional dominance of local creative economies (Comunian and Gilmore 2015).

It is acknowledged however that the focus of this study on glassmaking and the role of UoS/NGC means further comparative studies on other localities and HEIs are needed to support the conclusions presented here. Future studies on other central HEIs and craft communities would provide significant insight into the dynamics of HEI-craft community interaction, its impact on craft careers and the success or failure of local creative production.

Note

This paper presents only the analysis of data collected as part of this research. Participant quotes and further data are available upon request.

Bibliography

- Amin, A., & Roberts, J. (2008). Knowing in action: Beyond communities of practice. *Research policy*, 37(2), 353-369. (p..359)
- Ball, L. (2003). Future directions for employability research in the creative industries. ADM (The Higher Education Academy Subject Centre for Arts, Design and Media). York: The Higher Education Academy.
- Ball, L., Hunt, W. & Pollard, E. (2010) *Crafting Futures: a study of the early careers of crafts graduates from UK higher education institutions*. Institute for Employment Studies/ University of the Arts London/ Crafts Council
- Banks, M. (2010). Craft labour and creative industries. *International Journal of Cultural Policy*, 16 (3), 305-321
- Bell, D., & Jayne, M. (2010). The creative countryside: Policy and practice in the uk rural cultural economy. *Journal of Rural Studies*, 26(3), 209-218.
- Bonanni, L. and Parkes, A. (2010) *Virtual Guilds: Collective Intelligence and the Future of Craft*. *The Journal of Modern Craft*, 3 (2), 179-190. (p.180)
- Boschma, R. (2005). Proximity and innovation: a critical assessment. *Regional studies*, 39(1), 61-74.
- Bourdieu, P (1986) *The Forms of Capital* in Szeman, I and Kaposy, T. (2010) *Cultural theory: An anthology*. Chichester: John Wiley & Sons, 81-93.
- Burt, R. S. (2004). Structural holes and good ideas. *American journal of sociology*, 110(2), 349-399.
- Burt, R.S. (2009) *Structural Holes: The Social Structure of Competition*. Cambridge, MA: Harvard University Press.
- Chapain, C. and Comunian, R. (2010) Enabling and inhibiting the creative economy: The role of the local and regional dimensions in England. *Regional Studies*, 44(6), 717-734
- Chatterton, P, & Goddard, J. (2000). The response of higher education institutions to regional needs. *European Journal of Education*, 35(4), 475-496.
- Comunian, R. (2012) Exploring the role of networks in the creative economy of North East England: economic and cultural dynamics, in Warf, B. *Encounters and Engagement between Economic Cultural Geography* Springer, London: Springer, 143-157
- Comunian, R. and Gilmore, A. (2015) *Beyond the Creative Campus: Reflections on the evolving relationship between higher education and the creative economy*. London: King's College London, available at www.creative-campus.org.uk
- Cook, S., Yanow, D., 1993. Culture and Organizational Learning. *Journal of Management Inquiry* 2 (4), 373-390.
- Council, C., Scotland, C., & Ireland, C. N. (2012). *Craft in an Age of Change*. London: Crafts Council.
- Crafts Council. (2014) *Our Future Is In The Making: An Education Manifesto for Craft and Making*. Crafts Council.
- Cummings, K. (2005) *Born of Industry: The First 150 Years of Glass Education in Stourbridge, England*. *The Urban Art Glass Quarterly* 98, 41-45.
- Daskalaki, M. (2010). Building 'bonds' and 'bridges': Linking tie evolution and network identity in the creative industries. *Organization Studies*, 31(12), 1649-1666.
- Davies, P (2007) *Glass in the North East* in Davies, P and Blackson, R. *Glass North East*. Sunderland: Art Editions North, 10-22.
- Dawson, J., & Gilmore, A. (2009). Shared interest: Developing collaboration, partnerships and research relationships between higher education, museums, galleries and visual arts organisations in the North West. *Renaissance North West, Arts Council England North West and the North West Universities Association*.
- England, L. and Comunian, R. (2015) *Creative Clusters and the Resilience of Knowledge: From Industrial to Creative Glassmaking*. *Cultural and Creative Quarters and Clusters: Developing a Global Perspective*. International Research Seminar. University of Angers, France. 9th June.

- Freeman, L. (1977). A set of measures of centrality based on betweenness. *Sociometry* 40(1), 35-41
- Gill, R., & Pratt, A. (2008). In the social factory? Immaterial labour, precariousness and cultural work. *Theory, culture & society*, 25(7-8), 1-30.
- Goddard, J., & Vallance, P. (2013). *The university and the city*: Routledge.
- Granovetter, M. (1973). The Strength of Weak Ties. *American Journal of Sociology*
- Gray, D. (2015) *Anatomy of a Social Network. Digital image, The Connected Company*. Viewed 11 August 2015 <https://medium.com/the-connected-company/anatomy-of-a-social-network-de73f1224ac5>
- Hannan, M. T. (1986). A model of competitive and institutional processes in organizational ecology. Cornell: Department of Sociology, Cornell University.
- Harvey, D. C., Hawkins, H., & Thomas, N. J. (2012). Thinking creative clusters beyond the city: People, places and networks. *Geoforum*, 43(3), 529-539. (p.534)
- Holroyd, A. (2012) *Why it's Important to be Open. Crafts Magazine [Online]*. Available at: <http://www.craftscouncil.org.uk/articles/why-its-important-to-be-open/> [Accessed 03 April 2015]
- Lee, D. (2011). Networks, cultural capital and creative labour in the British independent television industry. *Media, Culture & Society*, 33(4), 549-565.
- Lin, N., Vaughn, J. and Ensel, W. (1981). Social Resources and Occupational Status Attainment. *Social Forces*, 59, 1163-1181.
- Metcalf, B. (2008) *IY, Websites and Energy: The New Alternative Crafts*. Presentation at 2008 SNAG Conference, Savannah, Georgia. Available at: http://www.brucemetcalf.com/pages/essays/diy_websites_energy.html [Accessed 26 June 2015]
- National Glass Centre (2015a) *Stories of Glass in Sunderland: Exhibition Guide*. Sunderland: National Glass Centre.
- National Glass Centre (2015b) *A Brief History of National Glass Centre*. [online] Available at: <http://www.nationalglasscentre.com/about/aboutus/history/> [Accessed 22 August 2015]
- Ozgen, E., & Baron, R. A. (2007). Social sources of information in opportunity recognition: Effects of mentors, industry networks, and professional forums. *Journal of business venturing*, 22(2), 174-192.
- Petrova, S. (2010). Context, Content and Relevance in King, M., Greer, C E., and Hunt, J. (eds) *British Glass Biennale 2010*. Stourbridge: International Festival of Glass, 9-12.
- Polanyi, K. (1967). *The tacit dimension*. London: Routledge and K. Paul.
- Pomegranate and TBR (2014) *Studying Craft: trends in craft education and training Full Report 1*. London: Crafts Council.
- Scott, A. (2000) *The Cultural Economy of Cities*. London: Sage
- Seibert, S. E., Kraimer, M. L., & Liden, R. C. (2001). A social capital theory of career success. *Academy of management journal*, 44(2), 219-237.
- Stuart, T. E., & Sorenson, O. (2005). Social networks and entrepreneurship. In: *Handbook of entrepreneurship research*. Springer: US, 233-252.
- Sunderland City Council (2010). *Economic Masterplan*. Sunderland: Sunderland City Council. Available at: <http://www.sunderland.gov.uk/CHttpHandler.ashx?id=9657&p=0&fsize=927kb&ftype=Economic%20Masterplan.PDF>
- Swords, J., & Wray, F. (2010). The connectivity of the creative industries in North East England—the problems of physical and relational distance. *Local Economy*, 25(4), 305-318.
- Thomas, N. J., Harvey, D. C. & Hawkins, H. (2013). *Crafting the region: creative industries and practices of regional space*. *Regional Studies*, 47, 75-88.

Thune, T. (2007) University-industry collaboration: The network embeddedness approach. *Science and Public Policy*, 34(3), 158-168.

Torres, A.M. (2002). Marketing networks as a form of strategic alliance among craft enterprises. *International Journal of Nonprofit and Voluntary Sector Marketing*, 7(3), 229-243.

Tymon, W. G., & Stumpf, S. A. (2003). Social capital in the success of knowledge workers. *Career Development International*, 8(1), 12-20.

Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effect. *American sociological review*, 674-698.

Yair, K. (2011) *Craft and Higher Education*, London: Crafts Council

Zimmer, C. (1986). *Entrepreneurship through social networks. The art and science of entrepreneurship.* Ballinger, Cambridge, MA, 3-23.