

Innovation – A people management challenge: Small businesses in the new creative industries

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Introduction

The computer games industry is one of the youngest and most rapidly evolving new media sectors (Christopherson, 2004; Cadin and Guérin, 2006; PriceWaterhouseCoopers, 2008). Its economic significance has been widely recognised regionally, nationally and internationally (Scottish Government, 2004; South West RDA, 2006; Welsh Assembly, 2006; Nesta 2008a, 2008b; PriceWaterhouseCoopers, 2008; eKos 2009), and, most recently, in the UK's April 2010 budget which, after much lobbying, promised significant tax breaks to stem the 'brain drain' as large and successful games companies continue to move to locations with more favourable tax regimes (Palmer, 2010; NESTA, 2008; eKos, 2009). Election fortunes meant that this concession was short-lasting as the newly elected Conservative-Liberal government, in its 'Austerity Budget' of June 2010, announced to revise this concession. However, the presence of the computer games industry in the political debate remains indicative of its economic significance, in the UK as elsewhere.

The UK games industry, as elsewhere, is populated by a large number of micro and small independent studios and only a few larger players (Chaston, 2008; dePeuter and Dyer-Witthford, 2009). Support initiatives have yielded high business birth rates, but business survival rates beyond the critical 5 year period (McGregor and Solek, 2008) continue to be low (dePeuter and Dyer-Witthford, 2009). Surviving firms, if they demonstrate value-creation potential, remain vulnerable to being sold, mostly to non-UK firms, a trend that also characterises the high technology SME sector in general (NESTA, 2008). As high value adding jobs leave the country, the UK risks becoming a "creative and technical bodyshop" (NESTA 2007; Scottish Executive, 2006). The volatility of the industry's small businesses, and their reluctance to scale up thus remain critical issues for policy makers, in particular in local economies where the availability of high value employment is linked to economic regeneration (Bagwell, 2008).

The industry-specific literature examining facilitators and drivers of or barriers to growth is as yet limited (Holt and Macpherson, 2006), in part because of the relative youth of the industry, in part because games companies might be subsumed within more general studies of SME of factors affecting growth and performance (Edwards et al., 2004; Mason and Brown, 2010). Small games studios share similar facilitators of and barriers to growth with the SME sector at large, and high technology enterprises specifically (Barron and Hannan, 2002; (NESTA 2008, 2009). These can be classified into external and internal, supply/demand and resource-specific, structural or individual factors (Hadjimanolis, 1999), with variation, and degree of interplay between external and internal factors, possibly varying depending on industry or company life cycle, location, owner orientation, or competence levels (Lange et al., 2000; (Littunen, 2000; Blundel and Hingley, 2001; O'Gorman, 2001; NESTA 2008a, 2008b, 2009). As yet no conclusive insights into the factors hindering small computer games firms from scaling up have been produced.

Increasingly, the literature has shifted towards innovation rather than efficiency, as the key driver of growth, business success or failure (Hadjimanolis, 1999; Keizer et al., 2005; Edwards et al., 2005; Isaksen and Tidd, 2006; Bilton and Cummings, 2010). Changes in markets and the competitive strategies of large organisations have increased the pressure on SMEs to focus on innovation, innovation capabilities and innovation management (McAdam et al., 2004; 200). Accelerating technological and scientific developments and ever shortening product lifecycles have generated a particular innovation imperative – as well as opportunities - for SMEs (Keizer et al., 2000; O'Regan et al., 2005). These require a more strategic approach to innovation and effective innovation management skills if they are to survive and prosper in the long run (McAdam et al., 2004; Bessant et al., 2005; O'Regan et al., 2005). Studies to date suggest that the SME sector in general still demonstrates an innovation management deficit (O'Regan et al., 2005) or find innovation management a challenge (Bessant et al., 2005). This applies to SMEs in discontinuous environments characterised by technological step changes in particular (Bessant et al., 2005). In the computer games industry, for instance, the accelerating rate of technological change rapidly replaces established business models, thus reducing opportunities to establish routines of best practice. Given the large number of business failures in this sector, and the industry's reluctance to scale up, it is timely to explore whether innovation management challenges are part of the problem. Effective innovation management is thus imperative for this industry. This can only be improved on the basis of a better understanding of barriers to and impediments of this process.

The innovation literature to date has tended to view innovation, broadly defined as "the development and implementation of new ideas by people [...] within and institutional order (van de Ven et al., 1989: p. 590) and for commercial purpose, as a sequenced set of (managed) activities (Edwards et al., 2004; Isaksen and Tidd, 2006; Dodds and Hamilton, 2007). This has resulted in a rich body of generic best practice literature, and implicit assumptions of easy transferability of such practice from larger to smaller businesses (Edwards, 2000). In parallel, the majority of empirical studies are prediction-focused variance studies which assume innovation as invariant. By and large, innovation research is still considered to be short of conclusive findings and comprehensive frameworks, or seen as overly static, or inadequately addressing the complex dynamics of innovation in specific organisational and industry settings (Edwards, 2000; Johanessen et al., 2001; Tidd, 2001; Edwards et al., 2004). Importantly there is a paucity of qualitative studies and of studies addressing social and change dynamics of innovation (Edwards, 2000; Cardon and Stevens, 2004; Garnsey et al., 2006). This is characteristic of SME innovation research in particular, despite the argument that this branch of research, given its relative recency, may still be best served by qualitative research (Shaw, 1998). In consequence the majority of SME innovation research still presents a socially disembedded picture of the process. Given the economic importance of the SME sector, and of high technology industries such as the computer games industry in particular (Chatfield, 2010), this remains a research deficit awaiting to be addressed.

The aim of this exploratory study is to further, through a qualitative study and a phenomenological approach (Shaw, 1989), our understanding of innovation management in the computer games sector as a high technology sector of vital economic importance, and still requiring further research attention. More specifically we aim to examine through a case study approach how SMEs in this industry experience innovation as a process, how employees and management interact in this process, and to what extent industry-specific factors are influential in shaping a company's experience of innovation. Given the exploratory purpose of the study, the emphasis is on *how* innovation is enacted and made sense of.

The paper is based on qualitative data generated from a project funded under the ESRC Business Engagement Scheme. The paper focuses on people management practice and proposes that specific innovation contingencies of the games industry produce innovation management challenges which require a far more sophisticated approach to people management than is currently reflected in the relevant literature or practice of managing the industry's workforce. We suggest that 'reluctance to grow' may not (just) be a matter of external inhibitors, or strategic choice, or a combination of these, but, paradoxically, a consequence of an innovation-oriented strategic decision which, unexpectedly, translates into a change management and, ultimately, a people management task. Attempts to examine the impact of innovation on SME people management practices and employment relations are as yet rare (de Leede and Kees Loise, 2005), and this study aims to contribute to research in this area.

The paper is structured as follows: the next section reviews the innovation literature as it relates to SMEs with the view to demonstrating how this literature has shaped the explorative enquiry. The subsequent section outlines the specific innovation management context of the computer games industry to establish key change drivers. The case study explores how an industry specific decision to innovate for growth changes established management practices. These in turn result in an organisational reality best described as a dynamic contest between assumed and changing people management practices. It is proposed that 'barriers to growth' may well be the consequence of such unfolding process as a company engages with innovation.

Managing innovation through employees – about knowledge and creativity

While the literature critically examining the organisation of work in the new creative industry is substantial (Smith and McKinlay, 2009; Cadin and Guérin, 2006; Mayer-Ahuja and Wolf, 2009; Warhurst and Thompson, 2006) few studies address people management practices in this industry from a functional perspective, in part because these practices are still emerging (Cadin and Guerin, 2006; Cadin, Guerin and de Fillipi, 2006). Typically a young man's domain (Zackariasson and Wilson, 2007), Gaume (Gaume, 2006) speaks of rough management practices which indeed seem to exploit the gamer-enthusiast's passion for his (sic!) product to maximise surplus value (dePeuter and Dyer-Withford, 2009). But where emerging, people management practices show similarities with those practices promoted for knowledge intensive companies where competitive advantage results from intellectual capital and the generation of symbolic knowledge (Storey 2002; 2005; Cadin, Guerin and de Fillipi, 2006), or considered appropriate to manage the new economy knowledge worker or 'high potential employee' in the new economy *per se* (Cummins and Oldham, 1997).

Central to the discussion of effective people management in knowledge intensive companies is the management of creativity and innovation potential (Mumford et al., 2002), and the required supporting mechanisms. This is the dimension of knowledge management (Little and Ray, 2005) that most explicitly links to the new creative industries. The 'creatives' working in the new creative industries are not *more* than but *differently* creative from the (equally) creative knowledge workers elsewhere. All are high potential employees on whom their employers depend. Some of them are equipped with "deep smarts [...], the stuff that produces that mysterious quality, good

judgement” (Leonard and Swap, 2004: 88). All of them demonstrate the knowledge workers’ ability to engage in divergent thinking (de Bono, 1993), and the process of productive enquiry that uses knowledge to pursue the unknown (Cook and Brown, 1999). All are engaged in a creative process that integrates the duality of ‘novelty’ and value to generate innovation (Bilton 2007; Mumford and Gustafson, 1998; Mumford, 2000). Knowledge workers are creative workers, and ‘creatives’ are knowledge workers, and all of them are “creative people” (Mumford, 2000; Mumford et al., 2002). Maximising their productivity and leveraging their tacit knowledge for innovation constitute the central people management imperative for their employers. The inadequacy of conventional approaches and incentives for these employees was first attested by Drucker (Drucker, 1993), and has been reiterated since (Baron, 2001; Florida and Goodnight, 2005; Storey, 2005; Mumford, 2000; Mumford et al., 2002; Ehin, 2008).

Encouraging divergent thinking, creativity and innovation require a managerial mindset characterised by a positive, celebratory attitude towards innovation, combined with tolerance for failure; encouragement of open debate, and a prioritisation of innovation and change over stability and routine (Storey and Salaman, 2005; Storey 2005). Extrinsic motivation incentives are seen as detrimental to knowledge workers’ productivity and managers are to focus instead on offering intrinsically motivating “opportunit[ies] to do new things, to be innovative, to [...] learn and develop” (Storey, 2005: 211). This is at the heart of people management strategies for knowledge intensive companies and creates the link between the literature concerned with managing knowledge workers *for* creativity and the literature concerned with the management *of* ‘creatives’ because in both strands the imperative is on innovation through creative processes (Cummings and Oldham 1997). Assumptions about an essential conflict between knowledge worker and management (Florida and Goodnight, 2005) have been replaced by a less dichotomising notion of knowledge workers as self-organising communities of practice engaged in a seemingly voluntary and intrinsically motivated process of knowledge creation and sharing (Ehin, 2008; Stenmark, 2000). This also characterises game developers in internal and external networks (Simon, 2006). The difference between other knowledge workers and ‘creatives’ is thus one of degree, not one of substance (Bilton, 2007).

Managing these workers requires structures and processes which are radically different from traditional forms of organising work (Ehin, 2008; Bilton, 2007; Bilton and Leary, 2002; Mumford, 2000). Knowledge and creativity cannot be leveraged for commercial exploitation in conventional hierarchic structures (Baron, 2001). Networked flatter structures, self organising teams and projects, devolved decision making and democratic lines of communication are defining features of organising for knowledge creation (Bilton, 2007; Simon, 2006).

Autonomy is seen as vital to creating a work environment for creativity and innovation (Cummings and Oldham 1997), a prerequisite for, and facilitator of, new knowledge creation (Nonaka, et al., 2000) and intrinsically motivating. It relates to the individual as well as the self-organising teams which multiply divergent thinking (Nonaka et al., 2000). Autonomy combines with task complexity which supports creativity as it presents challenging and ambiguous problems.

Contextual factors recommended for the effective management of creative people include time, buffering against commercial pressures and client requests, structural separation for explorative innovation, encouragement of risk, a permissible attitude to failure, and slack (Mumford, 2000; Mumford et al., 2002). Feedback and reward should focus on work processes and the process of creative idea generation rather

than merely outcomes (Mumford, 2000; Stenmark, 2000) and the suggestion is made that extrinsic rewards may be counterproductive (Stenmark, 2000). If risk, failure and exposure to harsh peer-critique are part of the creative process, supportive teams and supervision are paramount to maintaining confidence and trust (Amabile et al, 1996; Oldham and Cummings, 1996). To be successful, innovative and creative companies are further advised to engage their employees in processes such as adventuring, exploring uncertainty, experimenting, incremental risk taking, conceptual or contextual confronting (Andriopoulos and Lowe, 2000). Such activities enhance organisations' capability to remain responsive to arising opportunities.

Creativity (management) research largely agrees with these premises. Amabile et al., and similarly Ekvall (1996), integrate most of the dimensions above within a conceptual model of the creativity-encouraging work environment. Relative levels of organisational, supervisory and team encouragement of creativity, autonomy and the relative sense of ownership flowing from that, resource availability, the balance of positive and external pressures and constraints combine to create an organisational climate that is more or less conducive to creative work (Amabile et al., 1996). There is thus broad agreement on how best to manage knowledge workers or 'creatives'. There is also agreement that this requires a different understanding of the role of the manager if the commercial imperative is to be achieved.

Creativity translates into innovation only if it creates business value (Bilton, 2007; Bilton and Leary, 2002). Managing knowledge workers thus requires a balance between the creative dimensions of exploration and the efficiency routines for commercial utility, a constant juggling of conflicting interests. Bilton's concept of brokering aims to overcome these tensions (Bilton and Leary, 2002; Bilton, 2007). Broker-managers set the boundaries for the creative process (Boden, 1994) and confine creative activity within commercial purposes. This creates the protected space for creativity *within* which freedom reigns, but it is managerially controlled. Brokering and facilitating replace command and control as the value-adding role of managers of creative people (Wilson and Stokes, 2005). Collaborative processes, challenging tasks, and exploratory open dialogues operationalise brokerage-management (Banks et al., 2002).

Brokering implies negotiation, boundaries and dynamics, and conflict, largely absent outside the labour process perspective (de Peuter and Dyer-Witthof, 2009) where a near-inescapable essentialist dualism between managerial and creative work is posited. The functional literature reduces these dynamics to a duality which can be (temporarily) resolved through brokering and the implementation of an appropriate mix of creativity-supporting processes and symbolic interventions. That the effectiveness of this mix will need to be reviewed is acknowledged (Banks et al., 2002), in part as a result of external drivers and structural industry changes which might force rationalisation processes associated with managerial effectiveness over those associated with explorative innovation (Tschang 2007). The solution lies in the balancing act (Tschang, 2007) which the manager can successfully perform (Bilton, 2007).

There is thus strong emphasis on management intervention to create the appropriate climate for creative work. Even where a dynamic concept is brought into play, it is assumed that the array of mechanisms and processes, once appropriately mixed, will create an effectively creative organisation. What is missing is an integration of this literature with an understanding of how industry dynamics produce change dynamics which shape the interaction between the brokers of innovation and the employees as innovators as management practice adapts.

Industry specific challenges?

The computer games industry is turbulent. Technology cycles are getting shorter, investment in new products is risky, the pressure to go to market fast immense, and business models outdate quickly (Christopherson, 2004; Cadin and Guérin, 2006). The required skilled workforce is often in short supply (Cadin et al., 2006). Instability thus remains a characteristic of the industry, not only because of its relative youth, but because dilemmas characteristic of all knowledge-based companies, i.e. the tensions between innovation and organisation, exploration and exploitation, autonomy and control, are particularly pronounced in this industry where the expectation of creativity and innovation are deemed the most defining features of the industry and the career identities constructed therein (Christopherson, 2004; Cadin et al., 2006). Dependent on the enthusiasm and intrinsic motivation of their designers and developers (Gaume, 2006; Zackariasson and Wilson, 2007), small games developers must focus on commercial pressures, efficiencies and routines without ever being able to neglect the need to provide motivation and opportunity for their key workers if they want to retain these. Work organisation in the industry is project-based around production activities which are short term, defined by deadlines and production specifications set by the client or by the company's own artistic or commercial aspirations (Christopherson, 2004). As such organisational forms are temporary, fluid and the workforce is required to readjust continuously to new project team configurations. In small studios this is a particular challenge as team selection principles are limited by resource constraints and hence pragmatic (Christopherson, 2004).

The computer games industry, as a new creative industry, displays a particular innovation challenge. The expectation that games developers should aim for the creation and eventual exploitation of intellectual property (IP), i.e. own games and consequently devote resources to higher value IP creation through explorative innovation is widely held among industry players, agencies, policy makers, present and future employees, and customers (Christopherson, 2004). It is a factor sensitively related to competitiveness in the global market (eKos, 2009), *and* to the retention of those employees who create such value. Work for hire (WFH), i.e. games produced to client specifications, is considered a necessity to generate the revenue required for riskier IP and is often seen as subservient to IP work (SET, 2010). Even companies who successfully produce games for clients feel compelled to create opportunities for employees to engage in IP because this is required for retention and for individual career perspectives (SET, 2010). Shifting to IP requires strategic shifts at some stage which involve either experimentation with flexible organisational forms, increase in workforce, a total shift from commercial WFH to IP, or structural arrangements for simultaneous explorative and routine activities. These demands reflect the conflicting tensions of exploration and exploitation (March, 1991). But while computer games developers share the "innovator's dilemma" (Edwards et al., 2005: 1122), the challenge to maintain both stability for exploitation and change for exploration (Nooteboom, 2000) is exacerbated in an industry with a fast-paced, pronouncedly creative and technology-driven innovation imperative. A games developer pursuing WFH will successfully build up a portfolio but at the price of dynamic capability (Tushman and O'Reilly, 1996). Yet without such capability for adaptation high tech businesses will not be able to sustain innovation for growth. Organisational ambidexterity, i.e. the ability to engage in *both* exploitation and exploration, seems of particular importance for this industry (Raisch, 2008; Raisch et al., 2009). *How* to develop such dynamic capability and how to manage it in this industry sector remains to be addressed.

Typically the owner-manager will select the structure deemed most appropriate for the business. What links his/her structural choices is the recognition that “exploitation requires maintenance of existing identity, knowledge and practice, with a certain amount of control and co-ordination, in a dominant design” whereas exploration “requires their change, with a loosening of control and co-ordination” (Nooteboom, 2000: 8). As a change management task this means managing paradoxes – and on a daily basis.

The computer games industry is a fast changing industry with technology permanently creating new business opportunities that may or may not be seized. Potential strategic inflection points may arise more frequently than in other industries. This context sharpens the organisational dilemmas mentioned above, and poses particular management challenges. Organisations in turbulent industries such as the computer games industry are likely to undergo frequent changes of variable depth, triggered by external opportunity and internal strategic response. How these interrelate with people management practices is the focus of this study.

The case

This study is part of a project funded by an ESRC Business Engagement Grant and designed to generate deeper knowledge of interrelations between industry specifics, strategic decisions and management practices in the computer games industry. The nature of the scheme required an open-ended rather than research-question driven approach assuming that knowledge co-production would occur as researchers and business partner engaged in dialogue over organisational change and management practice.

The business partner, CCC, was a small computer games development studio established in 2000. The company had a management team comprising the MD, and four senior members, and a workforce of 20 artists, developers and coders. At the time of the research the company had taken the decisive strategic step of moving from WFH to IP and was several months into this change. This had generated substantial changes to the organisation of work. While previously work had been organised around small short-life projects with each project team member executing his (sic!) respective specialism, the company now worked exclusively on two self-funded games developed by two larger teams, working with more ambiguous outcome specifications, and a less certain timeline. Client specifications had been replaced by a single artistic vision and quality standards controlled by one member of the senior team. The company was thus in a process of change typical for the industry in a. pursuing IP work as a prime strategic objective, b. managing this as a change process from commercial to creative work, and efficiency focus to exploratory focus, and c. selecting from a range of options the structures and work arrangements to MD considered most appropriate to achieve the IP related objectives. Throughout its existence the company had placed emphasis on creating an organisational culture and climate based on shared values of responsibility, autonomy and trust, and an understanding of the games they wanted to produce. That creativity and innovation needed to be fostered was understood, and various mechanisms supporting this had been employed over the years. When we first encountered the company in 2007, there was a high level of commitment and focus on future IP generation. HR practices were emerging.

Methodology

The purpose of the study is to understand a real life organisation, situated in a specific context, and over a period of time. The case study approach is recommended for such process-oriented and holistic exploration, in particular where researchers have little control over events (Flyvbjerg, 2003; Hakim, 1994; Patton and Appelbaum, 2003; Yin, 1994, 2009), as it generates in-depth reflexive data that capture the complexity and plurality of organisational perspectives (Patton and Appelbaum, 2003). An exploratory case study may be utilised to develop pertinent hypotheses and propositions for further inquiry and explore or refine existing theories (Kaarbo & Beasley, 1999, Yin, 1994), and this is indeed the future trajectory of the study. A concern about the value of case study research is scientific generalization from a specific case (Yin, 1994), however the purpose of a case study is to expand and generalise theories (analytical generalisation) and not to enumerate frequencies (statistical generalisation) (Yin, 1994). The generalisability of case studies can be increased by their strategic selection and the relevance and typicality of the present case reflects this. To that extent the study matches the requirements for a representative single case study as discussed by Yin (Yin, 2009). Further, as required for case study designs, triangulation, the synthesis of data from multiple sources, was attained through multiple data sources and contexts, stages of analysis, and researchers involved, which maximises the robustness of the study and the confidence of its conclusions (Bryman, 2004; Cresswell and Plano Clark, 2007; Denzin and Lincoln, 2008).

The data for the study was collected over a period of 8 months. Rich qualitative data was generated from semi-structured interviews with the managing director and senior management team, observations of meetings and staff interviews, producing multiple perspectives on change. The semi-structured interviews were used to elicit in-depth information about management practices as well as contextual information about the case study firm and sector. There are many advantages of interviewing, related to the long length of time spent with an individual respondent, including greater depth, allowing attitudinal and behavioural insights, the elimination of negative group dynamics such as difficulty with sensitive issues, and more control over the direction of the discussion (Greenbaum, 2000). The interviews were consistently structured around the key dimensions of the organisation, namely strategy, structure, culture, work organisation, to capture the shifting interactions and relations in the organisation. In addition researchers attended senior team meetings concerned with the strategic change issues. Five months into the data collection phase, the HR officer conducted in-depth interviews with all staff which combined questions the company deemed relevant as it faced transition issues, and questions generated by the researcher as they analysed organisational changes. These data were complemented by data generated from semi-structured interviews with employees in 2007 (Hotho and Haubrock, 2009). The staff interviews were then considered at a senior management meeting which the researchers attended. Data from these two sessions constitute what we later refer to as 'later stage'. All interview data were transcribed immediately after the interviews and the researchers identified and classified recurring themes separately and then compared these. Additional data sources were company literature, company value statements and web presentations. Three in-depth interviews with MDs of comparable studios were conducted separately to confirm the researchers' understanding of 'typical events' in the industry, and these were complemented by interviews with policy agencies (SET, 2010).

As required by Strauss (1987) the data analysis commenced immediately with the first interview with the observations and questions raised informed the categorisation of findings and the choice of further questions. The data were analysed using thematic coding (David and Sutton, 2004; Coffey and Atkinson, 1996; Strauss, 1987).

In generating codes we used both themes identified through the literature review and themes induced by the researchers in examining the interviews. At the first stage open codes were produced through asking a set of 'theory-generating' questions (Bohm, 2004) which enabled us to move beyond description, order and relate the data and to move towards assigning conceptual labels to the broken down data (Douglas, 2003). The purpose of open coding was in particular to contrast employer and management perspectives effectively (Douglas, 2003). At a second stage we tried to refine the codes into stronger concepts to generate a set of axial (aggregate) codes by reducing the open codes further (Strauss, 1987). This aided both simplification, through reduction to dominant categories, and also complication through an expansion and reconceptualisation of the data (David and Sutton, 2004; Coffey and Atkinson, 1996). In this way the approach to coding the data from this project was undertaken in a heuristic manner (Coffey and Atkinson, 1996). Within the analysis stage the emphasis has been on a holistic approach to explanation with an aim to think reflexively and critically about how the researchers' view of the world may have shaped their assumptions of the findings (Mason, 2002). This has helped promote the visibility of social processes situating the research within a real world context (Denzin and Lincoln, 2008).

For the purpose of data presentation, we use the following brackets:

- The change to IP work – innovation as imperative
- Intrinsic motivation through innovation for IP
- Key losses - Opportunity for multiple view points and divergence, combined with tolerance for failure
- Encouragement of risk taking
- Key contests - Autonomy versus control
- Creative space – the end to slack and buffering
- Brokering and boundaries
- Blame and trust

The study has generated rich and deep qualitative data from multiple perspectives of actors as the organisation underwent industry-typical change. This allows us to compare and/or juxtapose the perspectives of MD, senior team and employees respectively and to contrast an earlier and later phase in the process of change.

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Findings

The view from the bridge – senior management perspective

The change to IP work – innovation as imperative

The shift to IP work was mixed from the start – whilst seen as an inevitable step given industry dynamics and imperatives, the timing of the change was not ideal: coming too soon, and without a preferable transition period. *We did a pretty big step quickly and I think that took too many people by surprise. You need to transition.* The shift to IP work was not a strategic choice but made sense of as an externally

created imperative, necessary to build reputation, but also to escape the risk of *atrophy*, engendered by the successful work-for-hire. The company decided *to jump in* – but uncertain *whether it was the wisest thing to do*. *Stability* had been lost but there was also a *perception of freedom*. But this freedom created its own pressure as the IP work had to be *brilliant* in order to generate the income streams required for survival.

Because of the perceived *no option* situation, more sophisticated forms of control were felt to be needed and senior team hoped to achieve this through a set of performance, quality and behaviour-related values. The team had invested much effort in obtaining buy-in to the set of company values. At an earlier phase management were convinced that *morale, our identity, our quality has gone up*, but the feeling gradually changed to a sense of disappointment: *it's a sort of Chiefs and Indians thing [...] polarising the company into pivotal people who buy-into the values and maybe 60% who do not*. Midway through the change phase one senior member conceded that he had *given up* on trying to *convert people*. Management seemed to withdraw from the effort of managing all 'creatives' around company aspirations, accepting that IP work had polarised their *development resource*.

Such ambivalences characterise the entire change episode, and all reflection on the key dimensions of people management practice, and became ever more pronounced over time.

Intrinsic motivation through innovation for IP

Earlier the senior team expressed confidence that the shift to IP had increased the opportunity for innovation and artistic expression because, so the MD, *I have now delivered a deal that allows the team to make the game they want*. But the increased risk also increased the performance pressure on the team: *If they fail I would not trust them next time round*. The shift to IP seems a mixed blessing: greater opportunity for artistic expression generated – unexpectedly – greater pressure from senior management to *succeed* where previously failure might have been tolerated. At the early stage this seemed to work: *people take more responsibility and seem to be more innovative*.

At a later stage problems transpired: as senior managers had increased internal benchmarks for quality and creativity, IP work seemed no longer to deliver on intrinsic motivation. Retrospectively, work-for-hire became satisfying because it produced a straightforward motivating *cycle of satisfaction* IP work did not generate this, in part because management could not fuse its dualistic function of *liberating originality and* innovation and the commercial pressure that came with *having to prove ourselves to the outside world ... showing that we can compete on contemporary releases* pervaded all interviews. The pressure to create something *the company can be proud of, something brilliant* was enormous as the company's reputation was at stake.

The senior team responded by controlling the conflict through ever more stringent definitions of standards, processes and milestones to ensure that all employees understood that *the product comes first essentially rather than any personal preferences*. Repeatedly senior members emphasised the need to control *any one particular agenda* – a deliberate response to the *diva cult* seen as prevalent in the industry. Ironically, this eventually resulted in a situation where practically all decisions were run past the senior team member credited by all as the individual defining the company's artistic vision or signature-- *the CCC god!* IP thus reduced rather than expanded opportunity for all!

Key losses - Opportunity for multiple view points, and tolerance for failure

Tolerance for failure seemed to decrease. Instead senior managers talked about failure as a matter of letting down the company, not honouring the trust invested in the workforce. Tolerance for failure, in the literature functionally associated with innovation and experimentation, was replaced by suggestions of blame for failure, a significant and unexpected shift.

Encouragement of risk taking

There was no space for risk, as the entire enterprise was now *at risk*. Management had consequently introduced strict project management tools and discipline to ensure the reduction of risk, expecting daily updates on targets and milestones, and consistent progress reports. While project management routines had been in place whilst the company did commercial work, these were tolerated and supported as they clearly enabled efficient completion of tasks, and a speedy *cycle of satisfaction* as projects were completed within three to four week periods. As the company embarked on IP work, these routines were more frequently challenged in their meaningfulness, and as unnecessarily bureaucratic.

Key contests - Autonomy versus control

At the early stage the change to IP work was reflected on as a significant extension of autonomy and task complexity and an expression of greater trust in the workforce, with a clear emphasis on output control: *this puts enormous pressure on the teams to deliver and to maintain the trust invested in them*. Again at the early stage the *belief in people* and their ability was strong. Several months later senior members used expressions of disappointment and surprise at the lack of progress made. This was disappointment in the *development resource* which *just isn't set up the way that we need it*. The *difficulties* of making staff work autonomously yet to standard became a constant theme and this was attributed to matters such as wrong attitude, personal agendas or inability to submit to the collective interests.

At the later stage autonomy and control became key topics discussion. It almost seemed that the pressure to succeed on the two IP projects led to increasing conflict, resulting even in talk about *disciplinary action*. Teams seemed to struggle with the project management procedures as control mechanisms not fulfilling any purpose and rebelling against these: *they don't see the value of these mechanisms and they don't believe that there are any consequences for not doing it*. Whilst senior team members expected daily accountability, employees *consciously chose not to do this*. For management this was a *lack of professionalism* and employees seemed to have risked the trust invested in them: *all it does is undermine my confidence in us delivering anything. We can't do our job with that kind of attitude*.

Eventually the senior team's reflections on *autonomy* and the resultant *trust to deliver, not just deliver something but something that is quantifiably CCC* became a most ambiguous issue: the senior team felt they might not have supported staff sufficiently, but rationalised this by asserting that no other business in the industry would do differently. Autonomy during the work-for-hire phase was now seen as *an amazing illusion - people felt that they had more autonomy but that was intentional - it was a carefully controlled system*.

Creative space – the end to slack and buffering

IP work meant that the company had no resource slack, thus losing one component emphasised as supporting creative work. Combined with the firm imposition of a single – corporate – artistic vision, employees considered opportunities for creative expression reduced, resulting in a sense of disappointment regarding their psychological contract, whilst the senior team seemed to use the corporate creative vision as a means of risk control. Buffering from commercial realities was equally ambiguously treated – on the one hand regular communication of commercial realities had been deliberately replaced by a decision to place stories about the company outside to encourage staff to *seek proactively* any information they might need. At the same time employees' lack of commercial realism was deplored.

Brokering and boundaries

As the company changed, there was less evidence of brokering and negotiation of boundaries but increasing evidence of uni-directional managerial intervention. Dualities of artistic versus commercial activity, creativity-supportive and routine work had been replaced by a single artistic vision, and systems and structures designed to realise this vision, even at the price of properties supporting the creativity-conducive organisational climate. Rationalisation of processes and need for hierarchical controls shaped management intervention, and this was presented as a necessary process of professionalisation: *This industry does not need artists, this industry needs professionals*. It seemed that to survive the commercial risk of *original work* the company had to become far more 'managed'.

The view from below

The change to IP work – Innovation as imperative

The employee perspective presents a similarly ambiguous picture as employees reflected on the change to IP work. Employees too embraced IP: *you get so much more satisfaction out of something you've created*. And like the senior team they felt liberated: *we were starting to get like dozy old men*. But ambivalence had set in too: having expected that *the original stuff would be far more buzzing*, they became soberly *aware of the ramifications of failure*. Work-for-hire was 'nostalgically' described as a period where *I was happy because there was freedom within constraints*. Repeatedly employees felt that something had been lost.

Intrinsic motivation through innovation for IP

There was a sense that the 'artistic vision' was much more controlled from the top, a *one man one idea sort of thing behind design*, and this was seen as a source for irritation, conflict and disaffection in particular amongst the artists whose career aspirations were to *what they want to do*. For some, opportunity for artistic expression was replaced by a *visionary at the top*, and a *mysterious opaque kind of vision*. This meant a loss of commitment, because employees' own ideas not longer seemed to be valued: *I think we have lost what it was that attracted me to the company*.

Key losses - Encouragement of risk taking

Encouragement to take (artistic, technical) risks was replaced by strict process plans. While project management routines had been in place whilst the company did commercial work, these were tolerated and supported as they clearly enabled

efficient completion of tasks, and a speedy *cycle of satisfaction* as projects were completed within three to four week periods. As the company embarked on IP work, these routines were more frequently challenged in their meaningfulness, and as unnecessarily bureaucratic.

Key contests - Autonomy and task complexity combined with control

Unexpected for all, work-for-hire was now seen as giving much more autonomy and room for expression. Its loss i loss was regretted as the many pressures made project leaders *too controlling*, and too insistent on reviewing and milestones. Decisions were now *taken at the top and filtered down as task lists*. Significantly employees felt that previously *there was more trust in people* and their capabilities which they felt management had now lost, resulting in stricter control *which is not good for morale*. Employees remembered almost nostalgically the time when they could produce games for clients as a period that allowed autonomy, task discretion and satisfying amounts of creative opportunity. IP work had proven to be the opposite of what had been expected.

Creative space – the end of slack and buffering

There was no slack or space for creativity in this controlled operation. In fact the MD compared the company at one stage to a traditional manufacturing business. Commercial realities were ambiguous, employees feeling neither buffered nor challenged to realise these.

Brokering and boundaries

Employees seemed to ask for more negotiation of boundaries and options of work. They suggested that the company should configure projects differently, to different time scales, and in different configurations to enhance autonomy and creativity, should balance activity differently and should embed more trust, autonomy and artistic licence in employees to ensure that *teams are getting enthused about what they are doing*. The current system was seen as being triggered by *the huge commercial risk*, yet too controlling and thus in their perception wrong because *rules don't necessarily work in the industry*.

Both sides united – blame and trust

A pervasive theme throughout the interviews was that of trust and, implicitly, blame or failure. All interviewees were reflective as they made sense of the organisational experience of innovation, and the search for reasons why or causes for the pervasive sense of disappointment was a defining feature of the interviews. There were no simple, explicit or unidirectional attributions of blame and responsibility. But senior team members frequent references to misjudgements of resource capabilities, of timing and readiness, occasional them-us polarisations and a seeming tendency to increase levels of control rather than to seek more consultative resolutions to local conflicts signalled a distancing from employees rather than a will to reexamine the creative context of the organisation. And a sense of disappointment, or a qualified 'wait and see' attitude, among employees seemed indicative of some subtle changes to their psychological contract as the innovation process evolved.

Discussion

The literature relevant for the new creative industries context emphasises prescriptively the array of people management strategies, tools, practices and associated management responsibilities, or their *implementation*. Autonomy, task complexity, on the job challenges and supportive leadership (Mumford et al., 2002) are seen as vital for success in knowledge intensive firms, as are other techniques to foster intrinsic motivation. It is recognised that implementing these remains challenging and requires both experimentation and the ability to learn from failure (Davenport et al., 2002). For small creative firms, more engagement with learning and development is recommended (Chaston, 2008), in particular to overcome the seeming difficulty of subordinating the creative or expressive dimension of work to the commercial interest of the firm (Chaston, 2008). The literature is confident that this can be done by managerial intervention. This is a perspective on management as a sequence of episodic intervention.

This study, in contrast, suggests that greater emphasis must be placed on understanding *how* such companies endeavour to *sustain* such practices in the face of changing contexts and what happens to the shared understanding of these practices as management and managed experience their – changing – organisational reality. The study suggests that sustaining such practices is less a matter of gradual adjustment, than a struggle. It certainly is a process.

Whilst the perception of IP work as more intrinsically motivating and commercially valuable is widely held, the findings qualify this. Seemingly more creative work resulted in significantly higher levels of managerial control, and stricter rationalisation of processes. While this took participants as a surprise, the same trend has been observed as a prerequisite where game development increases in complexity (Tschang, 2007). While in theory this requires increased management effort to retain the balance between process rationalisation and interventions to sustain creativity, motivation and enthusiasm (Tschang, 2007), the pressures and resource constraints in the small case company resulted in a twofold loss of that balance as a perceived loss of confidence in the development resource exacerbated the perceived need for rationalisation and control. The subsequent sense of loss of autonomy and discretion then resulted in loss of commitment, motivation, and morale and amongst some a wish almost to return to work-for-hire. In turn, this attitude seemed merely to justify senior managers' reduced confidence in their teams' capability to rise to the challenge. Autonomy, control, space, support, expressed through feedback (Amabile et al., 1996; Mumford, 2000) were not realised as deliberate people management practices (Storey, 2005), but became contested issues, seen by senior managers as areas that needed more top down direction if the company was to survive, and seen by employees as components of their work arrangements that were being lost, thus undermining their commitment – and confidence. A previously more collegial and creativity-supporting environment seemed to transform into a stricter hierarchical organisation where previous team autonomy was replaced by almost conventional notions of line management. Where the literature emphasises multiple coaching and facilitating roles of team or project managers (Simon, 2006) as prerequisite for successful creative project, the company's IP work required, from the senior management perspective, the opposite of tighter control and accountability – a move ambiguously acknowledged as a commercial necessity and as counterproductive in terms of staff morale.

The challenge of managing in the creative industries has been described as resulting from the “paradoxes of managing and organising creativity” (deFillipi et al, 2004:15) and Bilton's notion of brokering between the opposites of exploration and exploitation, creative and routine work (and their relative status), and self expression

and commercial interest (Bilton, 2007) points towards a notion of people management as a process of negotiation, facilitation and creation of risk space, resources and supporting structures (Bilton and Leary., 2002; Scase and Davies, 2000). The effective management of these paradoxes is vital (Tushman and O'Reilly, 1996; Jones et al, 2004), the balancing act perpetual (Townley et al., 2009). This study sheds further light on the dynamics of this balancing act as we juxtapose management and employee perspectives and trace these over time. In response to industry specific opportunities, and the imperative to undertake IP work, collaboratively constituted by all stakeholders in the industry, the company embarked on an industry-typical risk strategy. As the strategy unfolded, the nature of IP work changed in texture, if not in meaning, and in consequence senior managers and employees, through the interrelated decisions and responses to work and people management practices, pulled the company in almost opposite directions. While management – paradoxically - saw the need for more control to deliver original work, employees – paradoxically - longed for the satisfaction generated by commercial work. What bound all was the surprise at this. *Introducing* practices designed to sustain creative or innovative knowledge work is an event; maintaining these is not a mere process, it is a struggle, and success is not guaranteed.

Conclusion – lessons to be learned

This paper aims to make a contribution to our understanding of the reluctance of companies in the new digital media industry to grow. Case studies do not allow for broad generalisation and their explanatory value is confined by the nature of the case (Yin, 1984, 2009). Yet the in-depth nature of this study has generated pointers for potential answers and avenues for research. The case suggests that management practices designed to support the 'creative climate' in the organisation, or at least a climate that motivates the typical workforce in the industry, their and the company's aspirations are not merely difficult to sustain but may risk collapsing as the company confronts the challenges of innovation as a process of significant change. Moreover these very practices can become a territory for contest and organisational strain as commercial and individual (not necessarily specifically creative) interests and perceptions collide. The MD acknowledged that *it is hard to build a creative business for the long term*.

At the end of the interview period the case company announced a reduction of its workforce and reduction of IP work, and this poses the question what might the industry learn from this case. A key lesson is certainly that explorative innovation, i.e. IP work, needs to be prepared in advance through small scale pilot sites, and continuous capability building through consistently maintaining a creative organisation. Perhaps even small studios in the industry need to revisit the way they balance WFH and IP, not seeing WFH as subservient (and implicitly inferior) to IP but as equally, if differently, creative, and innovative. If the tacit IP-WFH hierarchy is typical for the industry, policy makers should encourage a more balanced view rather than supporting WFH as merely 'means to an end'. Finally, change management capabilities should figure more strongly in management practice and in management development programmes supporting the industry than seems currently the case. The shift from WFH to IP, in this case study, has proven to be a change management challenge more than anything else. And maybe it is time to incorporate change management into the innovation research agenda (Edwards, 2000).

Limitations and further research

This case study has some limitations. As a single case study its level of generalisability is limited. We have countered this by triangulating the data with the literature review, interviews with managing directors of comparable firms and support agency representatives. While this has assisted in confirming the typicality of the case (Yin, 1984; Patton and Appelbaum, 2003), multiple case studies ought to be undertaken to verify further the findings, and to extend the insights into practices of innovation management in the industry. More research into change and changing management practices in the new creative industries needs to be undertaken to understand better what precisely makes this task so challenging, but also how responses to the innovation challenge differ across the sector. The industry specific innovation challenge seems framed around high levels of expectation, and success of IP work, of taking a *wow game* to market, i.e. success of explorative innovation links more deeply and more intricately the often conflicting interests of the organisation as a business and the individual 'gamer', developer or artist who builds is career and his market value on the basis of the company's success or otherwise in producing IP. Our study has illustrated how this innovation imperative creates manifold organisational strains that inevitably impact on the business and the people within it. This opens up new and challenging research avenues.

References

- Amabile, T. M. (1998), "How to kill creativity", *Harvard Business Review*, Vol. 76 No. 5, pp. 76-87.
- Amabile, T.M., Conti, R. Coon, H. Lazenby J. and Herron M. (1996), "Assessing the work environment for creativity", *Academy of Management Journal*, Vol. 39 No. 5, pp. 1154-1184.
- Andriopoulos, C. and Lowe, A. (2000), "Enhancing organisational creativity: the process of perpetual challenging", *Management Decision*, Vol. 38 No. 10, pp. 734-742.
- Bagwell, S. (2000), "Creative clusters and city growth", *Creative Industries Journal*, Vol. 1 No. 1: pp. 31-46.
- Banks, M., Calvey, D., Owen, J. Russell, D, W. (2002), "Where the art is: defining and managing creativity in new media SMEs", *Creativity and Innovation Management*, Vol. 11, pp. 251-260.
- Baron, A. (2001), "Preface", in: Swart, J., Kinnie, N. and Purcell, J., *People and Performance in Knowledge-Intensive Firms*, London: CIPD.
- Bessant, J., Lamming, R., Noke, H. and Phillips, W. (2005), "Managing innovation beyond the steady state", *technovation*, Vol. 25, pp. 1366-1376.
- Bilton, C., Leary, R. (2002), "What can managers do for creativity? Brokering creativity in the creative industries", *International Journal of Cultural Policy*, Vol. 8 No. 1, pp. 49 – 64.
- Bilton, C. (2007), *Management and Creativity: from Creative Industries to Creative Management*, Malden, Blackwell.
- Birley, S. (2002), "Attitudes of owner manager children towards family and business issues", *Entrepreneurship: Theory and Practice*, Vol. 26 No.3, pp. 5-2.
- Blundel, R.K. and Hingley, M. (2001), "Exploring growth in vertical inter-firm relationships", *Journal of Small Business and Enterprise Development*, Vol. 8 No. 3, pp. 245-265.
- Boden, M., ed. (1994), *Dimensions of Creativity*, Cambridge, MA, London: MIT Press/Bradford Books.
- Bohm, A. (2004), "Theoretical coding: text analysis in grounded theory", in: Flick, U. et al. (eds), *A Companion to Qualitative Research*, London: Sage, pp. 270-275.
- Bommer, M. and Jalajas, D. (2002), "The innovation work environment of high-technology SMEs in the US and Canada", *R&D Management*, Vol. 32 No. 5, pp. 379-386.
- Bryman, A. (2004), *Social Research Methods*, Oxford: Oxford University Press.
- Cadin, L. and Guérin, F. (2006), "What can we learn from the video games industry?", *European Management Journal*, Vol. 24 No. 4, pp. 248-255.
- Cadin, L., Guérin, F. and deFillipi, R. (2006), "HRM practices in the video game industry: industry or country contingent?", *European Management Journal*, Vol. 24 No. 4, pp. 288-298.
- Cardon, M.S. and Stevens, C.E. (2004), "Managing human resources in small organisations: what do we know?", *Human Resource Management Review*, Vol. 14, pp. 295-323.
- Carson, D. et al. (1995), *Marketing and Entrepreneurship in SMEs: An Innovative Approach*, London: Prentice Hall.
- Chaston, I. (2008), "Small creative industry firms: a development dilemma?", *Management Decision*, Vol. 46 No. 6, pp. 819-831.
- Christopherson, S. (2004), "The divergent worlds of new media: how policy shapes work in the creative economy", *Review of Policy Research*, Vol. 21 No. 4, pp. 543-558.

- Coffey, A. and Atkinson, P. (1996), *Making Sense of Qualitative Data: Complementary Research Strategies*, London: Sage Publications.
- Cook, S.N.D. and Brown, J.S. (1999), "Bridging epistemologies: the generative dance between organizational knowledge and organisational knowing", *Organizational Science*, Vol. 10 No. 4, pp. 381-400.
- Creswell, J. W. and Plano Clark, V. (2007), *Designing and Conducting Mixed Methods Research*, London: Sage Publications.
- Cummings, A. and Oldham, G. (1997), "Enhancing creativity: managing work contexts for the high potential employee", *California Management Review*, Vol. 40 No. 1, pp. 22-38.
- Damanpour, F. (1996), "Organisational complexity and innovation", *Management Science*, Vol. 42 No. 5, 693-716.
- Davenport, J. UK film companies: project-based organization lacking entrepreneurship and innovativeness? *Creativity and Innovation Management*, 15: 3.
- David, M. and Sutton, C. (2004) *Social Research: The Basics*. London: Sage Publications.
- deBono, E. (1993), *Serious Creativity: Using the Power of Lateral Thinking to Create New Ideas*, London: HarperCollins Business.
- deFillippi, R., Grabher, G. and Jones, C. (2004), "Call for Papers: 5. Paradoxes of Creativity: Managerial and Organizational Challenges of the Cultural Economy", Special Issue of *Journal of Organizational Behaviour*.
- Delahaye, B. (2005), "Knowledge management in an SME", *International Journal of Organisational Behaviour*, Vol. 9 No. 3, pp. 604-614.
- De Leede, J. and Kees Loise, J. (2005), "Innovation and HRM: towards an integrated framework", *Creativity and Innovation Management*, Vol. 14 No. 2, pp. 108-117.
- dePeuter, G. and Dyer-Witthford, N. (2009), "A playful multitude? Mobilising and counter-mobilising immaterial game labour", *fibreculture*, issue 5: Multitudes, creative organisation and the precarious condition of new media labour. http://journal.fibreculture.org/iissue5/depeuter_dyerwitthford-print.html [Accessed 7/07/2009].
- Denzin, N. K., and Lincoln, Y. S. (2008), *Strategies of Qualitative Inquiry* (3rd ed), Thousand Oaks, CA: Sage Publications.
- Dobbs, M. and Hamilton, R.T.M. (2007), "Small business growth: recent evidence and new directions", *International Journal of Entrepreneurial Behaviour and Research*, Vol. 13 No. 5, pp. 296-322.
- Douglas, D. (2003), "Grounded theories of management: a methodological review", *Management Research News*, Vol. 26 No. 5, pp. 44-52.
- Drucker, P. (1993), *Post-Capitalist Society*. New York: Harper Collin.
- Edwards, T. (2000), "Innovation and organizational change: Developments towards an interactive process perspective", *Technology Analysis & Strategic Management*, Vol. 12 No 4, pp. 445-464.
- Edwards, T., Delbridge, R. and Munday, M. (2005), "Understanding innovation in small and medium-sized enterprises: a process manifest", *Technovation* 25, pp. 1119-1127.
- Ehin, C. (2008), "Unmanaging knowledge workers", *Journal of Intellectual Capital*, Vol. 9 No. 3, pp. 337-350.
- eKos consultants (2009), *Internationalisation in Digital Media: A Briefing Paper*. Glasgow: Registered Office.
- Ekvall, G. (1997), "Organisational conditions and levels of organisational creativity", *Creativity and Innovation Management*, Vol. 6, pp. 195-205.
- Florida, R. and Goodnight, J. (2005), "Managing for Creativity", *Harvard Business Review*, July-August, pp. 1-8.
- Flyvbjerg, B. (2006), "Five misunderstandings about case-study work", *Qualitative Inquiry*, Vol. 12 No. 2, pp. 219-245.

- Garnsey, E., Stam, E., and Heffernan, P. (2006), "New firm growth: exploring processes and paths", *Industry and Innovation*, Vol. 13 No. 1, pp.1-20.
- Gaume, N. (2006), "Nicolas Gaume's Views on the Video Games Sector," *European Management Journal*, 24 (4), pp. 299–309.
- Gibson, C. B. and Birkinshaw, J. (2004). "[The antecedents, consequences, and mediating role of organizational ambidexterity](#)", *Academy of Management Journal*, Vol. 47 No. 2, pp. 209-226.
- Giddens, A. (1984), *The Constitution of Society: Outline of the Theory of Structuration*. Cambridge: Polity Press.
- Greenbaum, T. (2000), *Moderating Focus Groups*. Thousand Oaks, CA: Sage Publications.
- Güttel, W. H. and Konlechner, S. W. (2009). "Continually hanging by a thread: contextually ambidextrous organizations", *Schmalenbach Business Review*, 149-171.
- Jadjimanolis, A. (1999), "Barriers to innovation for SMEs in a small less developed country (Cyprus)", *technovation*, Vol. 19, pp. 561-570.
- Hill, J., Nancarrow, C., and Wright, L.T. (2002), "Lifecycles and crisis points in SMEs: a case approach", *Marketing Intelligence and Planning*, Vol. 20 No. 6, pp. 361-369.
- Holt, R. and Macpherson, A. (2006), *Small Firms, Learning and Growth: A Systematic Review and Reconceptualisation*. London: Advanced Institute of Management Research.
- Hakim, C. (1994) *Research Design: Strategies and Choices in the Design of Social Research*, Routledge: London.
- Hotho, S. (2008), "Professional identity: product of structure, product of choice", *Journal of Organizational Change Management*, Vol. 21 No. 6, pp. 721-742.
- Hotho, S. and Haubrock, A. (2009), "Unhying the hype - Managing Knowledge Workers in SMEs", in: Hotho, S. and Juerke, E. (eds), *Creativity, Competence and Corporate Responsibility: Knowledge Transfer in a Changing World*, Dundee: Abertay Press, pp. 329-250.
- Hoffman, K., Parejo, M., Bessant, J. and Perren, L. (1998), "Small firms, R&D, technology and innovation in the UK: a literature review", *technovation*, Vol. 18 No. 1, 39-55.
- Isaksen, S. and Tidd, J. (2006). *Meeting the Innovation Challenge: Leadership for Transformation and Growth*. Chichester: John Wiley and Sons.
- Jansen, J.J.P., Van den Bosch, F.A. and Volberda, H.W. (2006), "Exploratory innovation, exploitative innovation, and performance: effects of organizational antecedents and environmental moderators", *Management Science*, Vol. 52 No. 11, pp. 1661-1674.
- Jones, P., Comfort, D., Eastwood, I., Hillier, D. (2004), "Creative industries: economic contributions, management challenges and support initiatives", *Management Research News*, Vol. 27 Nos 11/12, 134-141.
- Kakati, K. (2000), "Success criteria in high-tech ventures", *Technovation*, No. 23 Vol. 5, pp. 447-457.
- Kaarbo, J. and Beasley, R. (1999) "A Practical Guide to the Comparative Case Study Method in Political Psychology", *Political Psychology*, Vol. 20, pp. 369-391.
- Keizer, J.A., Dijkstra, L., Halman, J.I.M. (2002), "Explaining innovative efforts of SMEs. An exploratory survey among SMEs in the mechanical and electrical engineering sector in The Netherlands", *technovation*, Vol. 22, pp. 1-13.
- Keogh, W. (1999), "Understanding processes and adding value within innovative small firms", *Knowledge and Process Management*, Vol. 6 No. 2, pp. 114-125.
- Lange, T. Ottens, M. and Taylor, A. (2000), "SMEs and barriers to skills development: a Scottish perspective", *Journal of European Industrial Training*, Vol. 24 No. 1, pp. 5-11.
- Kitching, J. and Blackburn, R. (2002), *The Nature of Training and Motivation to Train in Small Firms*. Research Report 330. Department of Education and Skills.

Leonard, D. and Swap, W. (2004), "Deep smarts", *Harvard Business Review*, Vol. 82 No. 9, pp. 88-97.

Littunen, H. (2000), "Networks and local environmental characteristics", *Small Business Economics*, Vol. 15 No. 1, pp. 59-71.

Little, S. and Ray, T., eds (2005), *Managing Knowledge*. 2nd ed., London: Sage.

Macpherson, A., Jones, O. and Zhang, M. (2004), "Evolution or revolution? Dynamic capabilities in a knowledge dependent firm", *R&D Management*, Vol. 34 No. 2, pp. 161

Mayer-Ahuja, N. and Wolf, H. (2009), "Beyond the hype: working in the German internet industry", in: McKinlay, A. and Smith, C. (2009), *Creative Labour: Working in the Creative Industries*, London: Palgrave, pp.210-233.

March, J.G. (1991), "Exploration and exploitation in organisational learning", *Organization Science*, Vol. 2 No. 1, pp. 71-87.

McAdam, R., McConvery, T. and Armstrong, G. (2004), "Barriers to innovation within small firms in a peripheral location", *International Journal of Entrepreneurial Behaviour & Research*, Vol. 10 No. 3, pp. 206-221.

McGregor, N. and Solek, N. (2009), "Higher education spin off activity in Scotland: issues of quantity and quality", in: Hotho, S. and Juerke, E. (eds), *Creativity, Competence and Corporate Responsibility: Knowledge Transfer in a Changing World*, Dundee: Abertay Press, pp.99-109.

Mumford, M.D. (2000), "Managing creative people: strategies and tactics for innovation", *Human Resource Management Review*, Vol. 10 No. 3, pp.313-351.

Mumford, M.D. and Gustafson, S.B. (1998), "Creativity syndrome: integration, application and innovation", *Psychological Bulletin*, Vol. 103, pp. 27-43.

Mumford, M.D., Scott, G.M., Gaddis, B. and Strange, J.M. (2002), "Leading creative people: orchestrating expertise and relationships", *The Leadership Quarterly*, Vol. 13, pp. 705-750.

NESTA (2008a), "Unlocking the potential of innovative firms", *Policy Paper*, London: NESTA Policy and Research Unit.

NESTA (2008b), *Raise the Game: The Competitiveness of the UK's Games Development Sector and the Impact of Governmental Support in Other Countries*, Games Investor Consulting (December 2008).

NESTA (2009), *It's Time to Play: A Survey on the Impact of a Tax Credit for Cultural Video Games in the UK Development Sector*, Games Investor Consulting Limited (August 2009).

Nooteboom, B. (2000), *Learning and Innovation in Organisations and Economies*, Oxford: Oxford University Press.

O'Gorman, C. (2001), "The sustainability of growth in small- and medium-sized enterprises", *International Journal of Entrepreneurship Behaviour and Research*, Vol. 7 No. 2, pp. 60-75.

O'Regan, N., Ghobadian, A. and Sims, M. (2005), "Fast tracking innovation in manufacturing SMEs", *technovation*, Vol. 20, pp. 1-11.

Oldham, G.R. and Cummings, A. (1996), "Employee creativity: personal and contextual factors at work", *Academy of Management Journal*, Vol. 39 No. 3, pp. 607-634.

Palmer, M. (2010), "Plug for rain drain pleases computer games developers", *Financial Times*, 25th March 2010, p. 8.

Patton, E. and Appelbaum, S.H. (2003), "The case for case studies in management research", *Management Research News*, Vol. 26 No. 5, pp. 60-71.

Paige, R.C. and Littrell, M.A. (2002), "Craft retailers' criteria for success and associated business strategies", *Journal of Small Business Management*, Vol. 40 No. 4, pp. 314-332.

PriceWaterhouseCoopers. 2008. *Global Entertainment and Media Outlook 2008-2012*.

- Rae, D. (2002), "A narrative study of entrepreneurial learning in independently owned media businesses", *The International Journal of Entrepreneurship and Innovation*, Vol. 3 No. 1, pp. 53-59.
- Raisch, S. (2008), "Balanced structures: designing organizations for profitable growth", *Long Range Planning*, Vol. 41, pp. 483-508.
- Raisch, S., Birkinshaw, J., Probst, G. and Tushman, M.L. (2009), "Organizational ambidexterity: balancing exploitation and exploration for sustained performance", *Organization Science*, Vol. 20 No. 4, 685-695.
- Reid, R., Morrow, T., Kelly, B. and McCartan, P. (2002), "People management in SMEs: an analysis of human resource strategies in family and non-family businesses", *Journal of Small Business and Enterprise Development*, Vol. 9 No. 3, 245-259.
- Scase, R. and Davis, H. (2001), *Managing Creativity*, Milton Keynes: Open University Press.
- Scottish Government (2004), *A Smart Successful Scotland: Strategic Direction of the Enterprise Networks and an Enterprise Strategy for Scotland*. Edinburgh: Scottish Government Publications.
- Scottish Enterprise Tayside (2010), *Research Interviews*. Transcribed by researchers. Dundee.
- Simon, L. (2006), "Managing creative projects: An empirical synthesis of activities", *International Journal of Project Management*, Vol. 24, pp. 116–126.
- Smith, C. and McKinlay, A. (2009), "Creative industries and labour process analysis", in: McKinlay, A. and Smith, C. (2009), *Creative Labour: Working in the Creative Industries*, London: Palgrave, pp. 3-28.
- South West RDA (2006), *Regional Economic Strategy for South West England*, Exeter: Southwest RDA.
- South West RDA (2007), *Unlocking the Creative Potential of the South West*, Exeter: South West RDA.
- Stenmark, D. (2000) "The role of intrinsic motivation when managing creative work", *Proceedings of ICMIT 2000*. Singapore, IEEE Press.
- Storey, J.D. (2002), "Education, training and development practices in medium and small sized enterprises. Do they really influence firm performance?", *Omega* 30, pp. 249-264.
- Storey, J. (2005), "Human Resource policies for knowledge work", in: Little, S. and Ray, T. (eds), *Managing Knowledge*. 2nd ed., London: Sage, pp. 199-220.
- Storey, J. and Salaman, G. (2005), *Managers of Innovation: Insights into Making Innovation Happen*. Oxford: Blackwell.
- Strauss, A. (1987) *Qualitative Analysis for Social Scientists*. Cambridge: Cambridge University Press.
- Tidd, J. (2001), "Innovation management in context: environment, organization and performance", *International Journal of Management Review*, Vol. 3 No. 3, pp. 169-183.
- Tidd, J. Bessant, J. and Pavitt, K. (2001), *Managing Innovation: Integrating Technological, Market and Organisational Change*. 2nd ed. Chichester: Wiley.
- Townley, B., Beech, N., and McKinlay, A. (2009), "Managing in the creative industries: Managing the motley crew", *Human Relations*, Vol. 62 No. 7, pp. 939-962.
- Tschang, F. T. (2007), "Balancing the Tensions Between Rationalization and Creativity in the Video Games Industry", *Organization Science*, Vol. 18 No. 6, PP. 989-1005.
- Tushman, M.L. and O'Reilly, C.A. (1996), "The ambidextrous organization: managing evolutionary and revolutionary change", *California Management Review*, Vol. 38, pp. 1-23.
- Warhurst, C. and Thompson, P. (2006), "Assumptions and evidence: work and organisation in the UK creative industries", mimeo *Scottish Centre for Employment*

Research, Department of Human Resource Management. Business School, University of Glasgow, UK.

Welsh Assembly Government (2006), *Wales: A Vibrant Economy*. Cardiff: Department of Enterprise, Innovation and Networks.

Wilson, N.C. and Stokes, D. (2005), "Managing creativity and innovation: the challenge for cultural entrepreneurs", *Journal of Small Business and Enterprise Development*, Vol. 12 No. 3, pp. 366-378.

Yin, R.K (1994), *Case study research: design and methods*. Thousand Oaks, CA, Sage Publications, Inc.

Yin, R.K. (2009), *Case Study Research: Design and Methods*. Fourth Edition. Thousand Oaks, CA, Sage Publications.

Zackariasson, P. and Wilson, T.L., "Competition and competitiveness in the video game industry", *Paper American Society for Competitiveness Conference 2007*.