



Sanna Karkulehto & Kimmo Laine (eds)

# Call for Creative Futures Conference Proceedings

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UNIVERSITY of OULU



Sanna Karkulehto & Kimmo Laine (eds)  
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## Preface

### Call for Creative Futures

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*Call for Creative Futures* was an interdisciplinary conference held in Oulu, Finland on October 10<sup>th</sup> and 11<sup>th</sup> 2006. More than 160 scholars, officials and entrepreneurs (and another 86 via Internet and mobile network) from various fields of research, education, culture and cultural industry gathered to debate about the prospects for the creative industries on a local as well as global perspective. The scope of the conference encompassed such thematic entities as creativity, innovations, the creative economy, applied arts and content business and their future state both on the conceptual and industrial levels. Discussions were held about the essential activities on the field, the domains and actors in the field and their preconditions and possibilities for achieving the long awaited and widely promised growth and internationalisation. In addition, the goal of the conference was to respond to such topics as the innovation processes and their management, education, research and development in the field and the productions and services in the field.

The bi-lingual (English and Finnish) and inter- and multidisciplinary conference opened up with a dialogue on the “Futures of Northern Universities as Innovation Environments” by the rectors of the University of Oulu, Lauri Lajunen, and the University of Lapland, Mauri Ylä-Kotola, chaired by Dr. Sam Inkinen. The following two days featured five keynote presentations, one of which is published here as “The Age of Imagination – Placing Art and Design at the Centre” by the President of Ontario College of Art and Design, Sara Diamond. The field of the workshops covered a large multi-disciplinary field from management in innovation processes to the borderlines between education, research and development in the creative industries, from the connections of creativity, innovation and information technology to conceptual analysis of the terminology used in creative industry and

future studies. The total amount of papers presented at the workshops was around 30, and about one third of these are published here as conference proceedings. The texts reflect the variety of disciplines and the wide range of academic performances represented at the conference.

The conference was organized by the project *Creative Processes and Content Business Management* (CreaM), provided by the Department of Art Studies and Anthropology and financed by ESF, in co-operation with the Turku School of Economics (TULIO Graduate School), the Faculty of Art and Design at the University of Lapland, and the Pori School of Art and Media at the University of Art and Design. The editors wish to thank the organizers, the people in the Department of Art Studies and Anthropology, especially Professor Liisi Huhtala and Head of Department Eero Jarva, the staff and the board members of the CreaM Project, and the contributors and participants of the conference for lively conversations and a successful event. Also, we would like to thank Maija Myllylä for editing the proceedings and Pirjo Lempeä for the layout of these pages.

The next *Creative Futures* -conference will be held in October 2007 in Pori, Finland, and the main organizer will be the Creative Leadership Project. Our best wishes to the organizers: may the lively conversations started in Oulu go on in critical search for creative futures!

Oulu and Turku, 21 January 2007

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Sara Diamond

## The Age of Imagination – Placing Art and Design at the Centre

*Sara Diamond*

*President of the Ontario College of Art & Design*

The force of 21<sup>st</sup> century transformation begs for a concept that embraces the social capital of the creative class, and more than that, describes the very processes that activate knowledge, turning it discovery. When Richard Florida describes, “an age of pervasive creativity that permeates all sectors of the economy and society”, he conjures in my mind, an image of a multivalent flow of power that swirls within the DNA of any economic, social or cultural transformation—the energy within the triple helix.

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That force is “imagination”, the capacity to think beyond constraint, and then to render as real. And it is here that culture matters—for artists, designers, and other cultural makers transform the stuff of mind to stuff that matters and is matter. Artists bring a disciplined imagination that can melt and meld a problem – making is soluble and solvable.

Creativity is a messy business. It requires freefall, free diving, rupture through repetition, muck, extraction, revisionism.

Without even thinking we live and breath the power of popular culture for the 20<sup>th</sup> century has been the epoch of the consciousness industries (mass media, fashion, advertising, games) and the métier of the consciousness industries— is the ability to unleash the collective imaginary of society. And what is perhaps so compelling about the current moment, with its focus on participatory media and the “prosumer”, is the potential permeability of a culture of the imagination through broad layers of society.

In our recent strategic planning work at the Ontario College of Art & Design we built scenarios that addressed the possible futures of creativity, placing these within a larger analysis of social, economic and political change. We looked at emerging social values and asked: Would the tools and expressions of culture achieve a high level of influence, challenging, leading and shaping society’s values and perspectives? Or would culture become narrow, more service-focused, bound by history, buffeted by immediate values in society? The sustainability of the world’s resources and the level of conflict in the world and the forms that resolution would take were key elements of a second axis.

Would the world become more open, outward looking and integrated as part of a global community? Or could the world become more inwardly focused and narrow in a mosaic of local communities and interests? Were there meeting grounds between these axes?

This exercise is particularly relevant because we are seeing the dramatic re-enactment of the Age of Anxiety of the 1920s, at least in some quarters. Madeleine Bunting describes this condition in *The Guardian*: “We live for longer and in greater security than ever before, yet... fear has become the dominant currency of public life — our politics and our streets — and it reaches deep into our most private emotions.”<sup>1</sup>

7 Unlike the prison, the television, the school, and other systems of authority, while there is a multi-point quality to the structures of the Internet, monitoring is polyvalent and multi-located. Reality television makes participatory surveillance into a cultural enterprise, with its overarching intimacy and 24/7 attention to the mundane, in combination with a heightened sense of desperation about social mobility (Murray & Ouellette, 2004). Theorists such as Sandy Stone, Sherry Turkel and Geort Lovinck argue that the Internet has opened possibilities. Many participants in online communication are contradictory, protective of their right to contribute to dialogues and to control their data at the same time that they want to shop online and feel secure against terrorism. As DJ (Spooky) and theorist Paul Miller demonstrates, consumer programmers and young music lovers created peer-to-peer systems that disrupted highly centralised server control and thin clients, reinstating control to the originator of a communication (Miller, 2004). Consumers use mobile phones to build active communities. And, lest we forget, Google’s almost \$1.2 billion acquisition of Youtube, with DIY videos, porn and documentaries.

On the same day, a prize winning Texas schoolteacher with 23 years of teaching experience was sacked after she allowed her pupils to see a nude art work during a museum field trip. A parent complained that his child had been exposed to "an abstract nude" - a Greek funerary relief from 4BC depicting a marble torso. (This is not sauna culture).

The cultural moment — with its raw materials for futurists -- is best understood as a complex terrain where the stakes are lateral flow, command and control, repression and openness. This context introduces a compelling urgency for art in the 21st century, an art that, with all of its complexity and challenges, allows us to live within and resolve — “the rich texture of the present.”<sup>2</sup> Consider Carsten Höller—his Tate Modern Unilever Commission installation, Test Site 2006, is a series of slides where visitors can experience both the visual spectacle of watching people sliding and the "inner spectacle" of the state of simultaneous delight and anxiety as they have a go descending in the slides.

<sup>1</sup> Bunting, M. (2006) <<http://www.guardian.co.uk/comment/story/0,3604,1335171,00.html>> (last viewed May 2006)

<sup>2</sup> Varela, FJ, Thompson, E & Rosch, E (1993) *The Embodied Mind: Cognitive Science and Human Experience*. Boston: MIT Press.

In a recent poll, American teens expressed optimism that future inventions and innovations would be able to solve important global issues, such as clean water, world hunger, disease eradication, pollution reduction and energy conservation. Lemelson-MIT Program Director Merton Flemings said,

Teens' belief that science and technology may hold the answers to our biggest societal challenges is encouraging, but it also begs the question: Is this generation properly equipped and motivated to invent solutions to these mind-boggling challenges?

In fact, we need to fuse art & design capability right into the science and technology learning and solution matrix—because art and design combine deconstructive understanding with human needs sensibility. It is that fusion that can bring the bipod revolution, or make a Karim Rashid chair a household word.

The problem we must address is deeper. In his history of science and studies of the emergence of techno-culture, philosopher-sociologist Bruno Latour has shown the ways that scientific and technical invention are “black-boxed” – that is, represented as finished, whole products whose inner working, or mode of development, cannot be seen. Society naturalises inventions and science appears as a free-floating enterprise, operating as an engine outside of society, “without people as carriers” (Latour, 1987, p133). The mystified and invisible processes of invention make the intentions and ideas behind each new stage of technology appear as absolutes. To create an innovation culture, (one that is driven by possibility) we need to open these black boxes--a gesture that participatory tools, open source, user-centred design and certainly artists' work with technology has begun.

If I suggest that the dialogue of creativity has to place culture at centre stage, what do we mean by culture? Ontario, Canada is adopting a cultural policy that would acknowledge the texture of lived culture, with all of its informal and formal modes of expression. Cultural resources are what make a place distinctive and unique, and their potential and transformative power lie in the skills of its people, which are unleashed through their creative practices.”<sup>3</sup> “The cultural ecology is the complex system of social structures and cultural features in relationship to the rest of the social and physical environment...The system is complex and multidimensional...A growing body of evidence indicates that a healthy cultural ecology supports sustainable economic development in the increasingly important creative economy.”<sup>4</sup>

A cultural ecology provides intrinsic (communication, constructing meaning, creating a sense of play from experimentation and discovery), instrumental (promoting learning, building cohesion, trust, promoting health, sustainable communities; innovation) and institutional (history carrying for a culture, facilitating) values. Because of this fundamental role, culture has been described as the “fourth pillar”, or even better, the column of energy driving the helix. (Culture--The Fourth Pillar, Conference, Australia, 2004)

<sup>3</sup> Ontario, Page 8

<sup>4</sup> Ibid. Page 12



Let's return to our present context.

The digital revolution is the mainstream—and that revolution has been televised—it is ubiquitous. The disruptions, the edge conditions, have overtaken. Timothy Druckery, writing over ten years ago foresaw the ways the digital would become biotechnical:

The cognitive system becomes a more pertinent subject than the communicative system. Systems supplant cultures. Networked communities, the emergence of bio-computing and genetic mapping represent fields in which information has become essentialism... a consideration might be made of the image not only as a signifier, but rather as an event....”<sup>5</sup>

In other words, knowledge has become cognitive, sensory and integrated. And the monumental problems, global warming, energy shortages, require material and social answers.

Cultural tools are critical because the body (literal) and its metaphor (Nature) are the stakes. This is an era that requires the EMBODIED knowledge of art practice, theatrical improvisation, and design brain-storming, physical game play to meet the rational approaches of science and to invent perceptions beyond our current capacities. Techniques like location storming (where teams develop a charrette in context) allow solutions to arise in situ.

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We need culture to understand time. Time is the Long Now, quantum, non-linear. Time is the matter of systems change, the juncture where science and art flow together, where the non-living and living meet. Artists of all kinds, are experts in time disruption and management, prescient in expressing now and soon, capable of showing unseen dimensions. Great designers such as Will Alsop or Bruce Mau, understand the interpolation of futurism and the present—they sniff the zeitgeist--placing their inventions at the next moment, yet within reach. Cleaning up the mess of the past is required while we make the neat future.

The philosopher Gilles Deleuze proposed that it is only if we “rethink time” that we will be able to transform our future and ourselves. He argued that, “Through memory, concepts, art and philosophy, we can move backwards and forwards through the flow of time; we can think other durations, and we can disengage perception from the apparatus of prompted actions.” (Deleuze, 1989) He suggested that time could be an explosive force, not glue. Neurobiologist Francisco Varela concurs. He describes “...the rich texture of the present, its “thickness” (retention, nowness, protention); and “the multiscaler hierarchies of temporal registers that underlies the flow of time”. Mark Hansen in *New Philosophy for New Media* suggests that machine time becomes a force that can allow a window into time, for example, machine vision overrides human vision (if you have ever looked through with an electron microscope)--and as such it is imagination that unites these limits of our perception with possibility -- allowing new realisations, a new vitality, one that stimulates our desire to be alive, to discover, to announce and redefine our sense of humanness.<sup>6</sup> He notes the abilities of artists' works

<sup>5</sup> Druckery, T, ed (1996) *Electronic Culture: Technology and visual representation*. New York: Aperture.

to “compel us to confront the rich temporal depth, or affective bodily spacing, that underlies our complex experience of time”.

Feminist theorists and writers also attempt to find ways of producing and understanding new forms of dynamic language. Ethicist Rosi Braidotti underscores “the genderisation of time and space as well as history and memory” (2006, p155). In her view, “the continuous present is set in opposition to the tyranny of the past” (p167). Language is living matter... with all kinds of ethos and musical variations. ” (p175) Stuart Hall, the Black British theorist looks at temporality through “hybridity, syncretism, multidimensional temporalities, the double inscription of colonial and metropolitan times” (Hall, 1996, quoted in Braidotti, op cit, p155). Braidotti, like Deleuze, poses the subject as in a state of constant becoming, “... Ethics means faithfulness to this potential, or the desire to become.” (p163) Philosopher, poet and novelist Hélène Cixous refuses narrative and closure, preferring a multiplicity of readings of the present and future. She states that it is only through moving through time freed from “the conventions of linear, sequential narrative” that the reader can achieve the full potential and spectrum of the text (experience), or, *jouissance*, “the whole spectrum of pleasure and enjoyment, sexual and otherwise” (p118).

This notion of “*jouissance*” jostles up nicely against concepts of “play” and “flow” explored by Brian Sutton-Smith, a semiotic games theorist. He would argue that game structures will replace narrative altogether and that games echo natural processes of evolution. Sutton-Smith looks at the many vocabularies of play. It can be understood as a form of bonding, as a chaotic or self-transcendent “flow”, as a means of reducing conflict, as a mix of sensory knowledge and reason, as an exploration of the radical variability of meaning, as a means to deconstruct reality, as a means to multiple goals, as a means of adaptation and variation (Sutton-Smith, 2001).

As we heard in the workshops, linguistic differences and assimilations are benchmarks within collaborative experiences – when, over time, different disciplines learn to talk to each other, understanding specialised terms, a world of potential unlocks. Sociologists and anthropologists, such as Bowker and Star, discuss boundary objects, which are objects that unify disparate spaces as gifts of exchange, allowing the creation of new relationships of power. The recipient begins to “own” the gift as much as does the donor (Star, 1989; Bowker & Star, 1996). In cross-disciplinary dialogue these gifts can be terms or words. Hence “semiotic artefacts are often the ‘boundary objects’ that mediate non-local, scale-breaking interconnections.” Concepts and words can draw one discipline into another’s field.

The brainstorm focuses on solving a problem. A brainstorm suspends judgment. It emerges new definitions. It combines irrationality and irregularity with intelligence – the brainstorm means to break through assumptions. Participants deliberately develop broad ideas as fast as possible. Brainstorming is a lateral thinking process. Far-fetched ideas can turn out to be appropriate solutions. Brainstorming is now often connected to body storming, to physical improvisation--acting out possible design solutions

<sup>6</sup> Hansen, M. 2005.

through participatory design. And body storming has become location storming. The relationship between face-to-face interaction (wherein facial expression and other forms of body language, as well as tone of voice and other contextual cues, inform meaning) and networked conversation or performance (where these cues are largely lacking or may be represented by other cues) cannot be underestimated. These processes are cultural!

So this time is truly a cultural moment, one that needs to again and again bridge engineering and cultural practices.

Cultural producers create contexts. At their best, the “sociable media” as MIT scholar Judith Donath calls them, of the 21<sup>st</sup> century such as Myspace, blogs, VOIP systems like Skype, , social networks, photo, video and music file sharing (Youtube, Flickr), text messaging, blogs and their aggregators, wikis, & on-line social and game spaces like Second Life, are characterized by virtual gift giving. At the same time personalisation and the direct sharing of stories and opinion are hallmarks of 21<sup>st</sup> century mass culture. This sharing occurs in a context that is increasingly collaborative, peer to peer, and engaged with process as much as product, style as much as function, not only in the West, but around the world as individual expression is equally heightened. These social and individual qualities, though enabled by technology, are disruptions, or side effects of the last great technological revolution. It is the global nature of this sociable media transformation that again, requires the capacity & also the possibility to think across cultures and to bridge to the imaginative powers outside of our own imaginations.

Culture has the capacity to create equitable global relationships. Glocal Culture can really shake that long tail! (Chris Anderson) The concept of “Glocal” – the connections between local and global communities—acknowledges the pervasive impacts of globalization on all economies while understanding the ongoing power of location. Cultural contact can be woven from the bottom up, through equitable cultural exchanges. The Internet provided the vast bridge across locations to create communities of interest and investment opportunities. Systems like Sellaband allow investment in alternate culture.

Mobile and locative technologies and the ongoing specificity of place as well as systems of control, created a double dimension of localism and globalism. Resistance to globalization has resulted in new economies, such as the Grammine bank that focuses on micro-economic development with technological systems that takes advantage of the world economy. The Latin American phenomena—combining Argentina’s refusal to collapse in the face of the IMF hand in hand with a cultural renaissance that is ironically making that country a tourism investment magnet, Brazil’s resolute insistence on open source, in part as a means to bring literacy and cultural tools into the favelas, Bolivia’s indigenous revolution—all draw on imaginative economic and creative models. All require the need to navigate respectfully, creatively and with intellectual integrity in a world of equitable diversity. The long tail in combination with access to international cultural imagery has created an appetite and economy for world music, alternative culture and art forms that are beyond the barriers and into the barrios of the world.

Art, design, culture is increasingly practised and recognized across cultural boundaries and from hybrid sources. Fundamental work is to be done in equitable partnership with the developing world. This would be the sort of social imagination brought together Dean Kamen the inventor of the Segway and Iqbal Quadir, the inventor of the Grameen Telephone Company to develop a new, solar powered miniature clean water machine that will dramatically eliminate disease. The project is, built on, “a distribution model fashioned after Grameen Phone's business, where village entrepreneurs (mostly women) are given micro-loans to purchase a cell phone and service. The women, in turn, charge other villagers to make calls.”

Artists and designers are creative strategists. It would be wise for companies to consist placing artists and designers into key business positions, for example on their board of directors and of placing artists and designers in key positions throughout their companies, directly involved in the critical planning of new products, processes and evaluations. Artists and designers could help companies to unilaterally adopt participatory design not just user testing—where the end user is engaged in the design process; creative improvisation and brainstorming; body storming; visualisation, as ways of moving their thinking closer to user needs?

Global and local citizenship, crisis resolution and peace making have never been so critical. We Need New Forms of Social Cohesion & we Need Culture to produce it. Karl Deutsch (1957) importantly described the nature of social cohesion afforded by a united community, a cohesion indicated by the cultivation of mutual loyalties or “we-feeling”, trust, successful prediction of behaviour and the ability of people to engage in cooperative action.<sup>7</sup>

Innovation collaborators operate within different cultures and even physical contexts.<sup>8</sup> Studies such as the comprehensive National Science Foundation's *Beyond Productivity: Information technology, innovation and creativity* indicate that creating a truly conjoined culture, with trust and “we-feeling”, requires relentless and attentive labour as well as institutional support (NSF, 2003; Packer & Jordan, 2001).<sup>9</sup> Effective collaboration, social problem-solving, citizenship, all requires cohesion across complex boundaries. This requires the creation of shared culture.

We could make citizenship an imaginative act. “It is above all by the imagination that we achieve perception and compassion and hope.” (Ursula LeGuin)

Artists and designers can engage with building citizenship. Youth at risk could rather be seen as potential influencers, communicators and working culture makers. The elderly can engage through culture. Citizenship can be associated with engagement, pleasure & empowerment, with imagining

<sup>7</sup> “Social Coherence and Tolerance”, The Metropolis Project <[http://www.international.metropolis.net/research-policy/social/chapt1\\_e.html](http://www.international.metropolis.net/research-policy/social/chapt1_e.html)> (last accessed 16 April 2006)

<sup>8</sup> NESTA's programmes encourage art and science collaboration in the UK. See Sommerer & Mignonneau, 1999.

<sup>9</sup> This NSF study looks at the history of cultural and technological innovation and expectations that surround it. See also Century, 2002 and 1999. He examines the criteria for success and failure and the tendency for new forms of science to emerge as well as new forms of culture.

solutions to problems. Cities and nation states can use culture to activate communities, to bridge boundaries, to keep our city clean, to resolve disputes....to engage communities in participation, in decision making.

Artists can help the public to reclaim our urban streets as spaces for public dialogue, debate, pleasure and exchange. Toronto recently undertook Nuit Blanche, a night of visual, media and performance art that went from dusk to dawn and drew a half million people. It was a model of safety and heralded a zeitgeist of cosmopolitan citizenry.

The future needs an international, multi-generational talent base that includes all children. Learning would start with the learner and be social as well as individual. “We especially need imagination in science. It is not all mathematics, nor all logic, but it is somewhat beauty and poetry.” ([Maria Montessori](#)) Schools need to be encouraged to use culture, art, music, dance, to create wisdom, engagement, numeracy and literacy, to allow for multiple learning styles. What if society did all that it could to encourage the trend towards self-motivate learning? There is extensive proof that learning in the arts creates capacities in science, mathematics and social skills (if you have doubts check the web site of The Arts Education Partnership (AEP) an American national coalition of arts, education, business, philanthropic and government organizations that demonstrate and promote the essential role of the arts in the learning and development of every child and in the improvement of America's schools—it holds extensive research findings). Changes in the forms of knowledge and communication, in the nature of learners, combining to require a more holistic perspective to cultural learning. It is applied across disciplines, links theory and practice. Students span all ages, they bring diverse life experience with them, they bring a prosumer attitude towards learning, they are technologically literate, and learning requires new metaphors such as gaming

The world needs a different research model—an action laboratory that integrates imagination with other forms of knowledge in research. Ahasiw Meskagen-Iskwew, a recently deceased Cree performance artist and Internet visionary said, “Understanding the world as an infinitely complex system of interactions, rather than a plethora of independent causes is a significant move away from reductionist approaches to understanding...perhaps the future lies less in the pursuit of specialized knowledge but rather an understanding of how this knowledge relates to and is influenced by the complexity of the real world.” We would build a unique research and innovation culture—action tanks to fuel discovery and knowledge transfer, linking major universities and industries with art and design and placing human needs at the center of technology.

Research must discover the ways that imagination and curiosity, embedded in the very methods of art and design can be forces in their own right (new multi-dimensional & temporal forms of visual art, new applications for emerging materials, discovery in cognition and perception predicated on art making) and equally link art and design to a larger innovation capacity -- through intensive human factors research, through participatory design, through providing fundamental knowledge about emotion, semiotics and meaning, through discovery, that helps populations stay healthy and active,



makes home care a viable alternative, or humanizes institutional experience, making it more effective and efficient.

The world needs to choose a sustainable pathway. Companies and governments need to put resources towards making sustainability desirable

This is a youth issue. Increasingly, art and design worldwide must assume responsibility for developing sustainable solutions in all areas, including the nature of building, electronics, local economies, health and welfare. Sustainability must find a new vocabulary, to make it sexy. What if our countries empowered young people to teach both ourselves and those even younger about the importance of sustainability as a choice and the measures that needs to be taken? We would make our cities emissaries for sustainability.

What model for the year 2020 might emerge from these actions?

Let's call it GlobeLab-- an optimistic, but not impossible scenario in which global creativity and problem-solving drive the world economy, with art, design & cultural expression firmly at its core. Everything is connected. Centres of political and economic power are distributed. Ubiquitous computing has raised global consciousness of both common problems, and distinct cultural and social differences. "Local" problem solving includes "Globe Lab's" approach to non-geographic resolutions, through physical and technical networked collaboration. Creative diversity, art, design methods and a cohesive cultural imagination and leadership are valued and harnessed in collaborative ways to help solve major global problems, from poverty and security, to disease and sustainability. "Prosumers" participate with experts, in designing their own products, spaces and experiences and are a powerful influence on art and design. History is valued, grounding individuals and communities, but not reified. Sound knowledge and research support a strong leadership that is bound by ethics, integrity, foresight, a willingness to experiment and take risks. Not for profits, as well as corporations and world government formations are effective partners. Institutions create global regional allies.

There are multiple speeds of enterprise--the super sonic and risk-oriented, is balanced with slow food, deep appreciation and a fundamental love of pleasure and the exquisite.

For artists, society is rich in paradox, evolving in its thinking and open to exposure and direction in reshaping society's view of itself. Creative collaborative teams are as renowned as individuals. There is cultural expression at every opportunity. The number of people directly employed in what in 2006 is known as "culture" greatly expands. We have mediated conflict, taught the power of multiple or lateral pathways, recycled, melded and made anew, linked pleasure with sustainability, animated our sense of history, reminded ourselves of the multiplicity of beauty, taught our world to revere, to reveal, and helped the world to heal. We are capable of making that world a reality.

The future is uncertain... but this uncertainty is at the very heart of human creativity.  
(Ilya Prigogine)

Welcome to the Age of Imagination!

Mark Kilgour

## **Big C versus little c Creative Findings: Domain-specific Knowledge Combination Effects on the Eminence of Creative Contributions**

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Research into creativity is not new. Creative thinking has been of interest to scholars for centuries. Despite the long history of research, it has only been in recent years that the importance of the area has started to gain increased significance and attention. The rapid pace of environmental change, and the need to develop a society that is open to that change, has necessitated the need for sound research into the field. In our turbulent global environment, this need to understand the creative process is intensifying.

Given the increasingly rapid rate of change, one area of particular importance for the study of creativity is how to encourage and enhance creativity in our youth. The father of modern creativity research, Guilford, recognized that the understanding of creativity has particular importance in relation to education systems. However, despite the early assertions by Guilford (1968), many educational systems are becoming more, not less, standardized (Furedi, 2006; Goldberg, 2004; Hargreaves & Goodson, 2006; Hughes, 2004; Platt, 2004). This results in a paradoxical problem. In a world requiring high levels of creative thought, education systems are encouraging processes that result in a less creative graduate. Much of this problem is due to our lack of understanding of the creative thinking process.

The aim of this article is to re-define the concept of creative thinking in a way that provides a basis for differentiating between the degree, or eminence, of different creative ideas. This provides crucial insights into the creative thinking process and how it can be enhanced. In re-defining the concept of creative thinking the article draws upon what is now a quite extensive literature, and integrates the various underpinnings of that research in relation to three important conceptual developments: a) divergent thinking, b) the degree, or relative eminence, of creative ideas, and c) domain-specific knowledge. The merging of these three conceptual areas provides the basis for the development of a model that defines the different types of creative thinking processes, and acts as a basis for its understanding and improvement.

## Defining Creativity

Historically there has been little understanding of the word creative or its importance. Since Guilford (1968) sparked renewed interest in the area there has been significant research aimed at provided more meaning to the word. One area of agreement in both practitioner and academic definitions is that creativity involves originality. As far back as the 1950's Bruner (1957), defined creativity as 'effective surprise', and, as stated by Runco and Charles (1992), "Of the various facets of creativity, originality is probably the most widely recognized" (Runco & Charles, 1992, p.537). However a definition of creativity that only accounts for originality causes a problem, namely, any idea, no matter how bizarre and inappropriate to the situation, would be encompassed. Original, or divergent thought processes alone, therefore do not fully account for a person's ability to develop ideas that will become creative breakthroughs.

Subsequently, academics have extended the definition of creativity to include the concept of appropriateness. Rothenberg and Hauseman (1976) define creativity in terms of originality and value. Sternberg and Lubart (1996) define creativity as the ability to produce work that is both novel and appropriate. For an idea to be creative it is therefore widely accepted that it must contain the two elements: originality and appropriateness (Jackson & Messick, 1967; Mumford & Gustafion, 1988; Runco & Charles, 1992; Kasof, 1995; Amabile, 1995; Ford, 1996; Mumford & Simonton, 1997; Runco, 2004). Subsequently, the following diagram (Kilgour, in press) is proposed to illustrate the creativity of an idea.

### Basic Creative Combinations Diagram

		Appropriateness	
		Low	High
Originality	Low	Not Creative	Not Creative Existing Solution
	High	Not Creative Bizarre Idea	Creative Idea

While it is agreed that a creative idea must be original and appropriate, this still leaves many important questions unanswered: how does a person develop a creative idea?, what is the creative thinking



process?, how do we define differences in the relative significance of creative ideas?, and do the thinking processes differ when a person is developing a minor or a major creative idea? It is not enough to know what a creative idea is, in order to answer these questions we must understand the creative thinking process itself. One prominent line of reasoning regarding the creative thinking process is that developing original and appropriate ideas requires some type of recombination process. This is where a person takes two previously unrelated ideas and combines them. This results in originality, as those ideas were not combined in that way before, and appropriateness, if the new combination is relevant to the situation. This contention is not new, indeed, since Guilford's (1968), pioneering research into the concept of divergent thinking, most researchers have acknowledged the importance of recombination of ideas as central to the process of creativity.

17 “Most current theories of creative problem solving stress the importance of the combination and reorganization process” (Mumford, Whetzel, Reiter-Palmon, 1997, p.11). In their study of creativity Coney and Serna (1995), stated that the essence of creative thinking was the process of merging disparate mental elements to develop a new and appropriate combination. In support of this there has been some evidence that the ability to combine and reorganize memories is related to creative success. Owens (1969) - “...skills in combining and reorganizing those parts was positively related to patent awards and superior's evaluation of creativity obtained 5 years later” (as cited in Mumford, Whetzel, Reiter-Palmon, 1997, p.11). Hence, much of the research into the creative thinking process focuses on the processes of creation, synarticle, or modification of ideas (Engle, Mah & Sadri, 1997; Mumford, Baughman, Maher, Costanza & Supinski, 1997). Finally researchers, (Mumford, Mobley, Uhlman, Reiter-Palmon & Doares, 1991; Scott, Longergan & Mumford, 2005) have noted that the creative process involves the creation of new memory structures either through the combination of distinct concepts, or the new combination of elements of existing concepts.

### **Creative Thinking Definition**

This previous research leads to the following definition of creative thinking processes;

*Creative thinking is the process of merging thought categories, or mental images, either across or within domains, in ways that have not been done before, in order to develop an original and appropriate solution to a situation or problem.*

This definition encompasses many of the areas of at least partial agreement in the literature, and also addresses another area of debate (Sternberg & Lubart, 1996) - whether or not there is a difference in the creative process when developing major versus minor creative ideas. This is important as many creativity researchers are not focusing on the same construct.

There are two types of creative ideas being researched in the creativity literature, researchers such as Gruber, (1974) and Simonton, (1984), look at highly creative ideas, major creative breakthroughs, that are widely recognized and then study the people who developed them. Others such as Wiley (1998), and Ward, Patterson, and Sifonis (2004), look at ideas generated by ‘ordinary’ individuals under experimental conditions: such as developing a new space creature for a science fiction book. While some would argue that developing an idea for a new type of space alien under experimental conditions is not the same as developing ideas such as the aeroplane or the computer, others however, would argue that while the significance of the ideas may differ, the process underlying those different levels of creative idea are the same (refer Csikssentmihalyi and Epstein, 1999).

It is important to determine which view is correct. Are all creative ideas essentially dependent upon the same thought processes or do major and minor creative ideas depend upon very different thought processes? If the processes required to produce different types of creative ideas differ, we need to understand those differences if we are to develop them in our societies.

The creative thinking definition above contends that there is a difference in the thought processes required to develop different types of creative ideas: major versus minor, and that difference is dependent upon the types of domains that are combined. The creative thinking definition provided above provides a basis for analyzing this issue by accounting for differences in the magnitude of creative ideas with the words: ‘either across or within domains’. In other words it provides a basis by which the difference in the eminence of creative ideas can be identified, measured, and explained - that is through an analysis of how ideas are combined, either within or across domains.

### **Eminent big C Creative Ideas versus Minor little c Creative Ideas**

Looking at how domains are combined as a basis for determining the significance of creative ideas has some existing basis. “Ghiselin (1963), noted that psychological processes underlying the production of major contributions, ... may not be equivalent to the processes underlying the production of minor contribution” (as cited in Mumford & Gustafson 1988, p.28). Besemer and Traffinge (1981) discussed differences in significance by stating that major creative products transformed the manner in which the audience perceives the world. Mumford and Gustafson (1988), suggested that the difference between eminent contributions and minor contributions may be that the former entailed the integration and reorganization of cognitive structures, while the latter was related more to the extension of existing cognitive structures. Perkins and Salomon (1988) noted that connection of similar ideas resulted in incremental developments that differ from that of major discoveries. Gardener (1993) distinguishes between everyday small c creativity and big C creative breakthroughs. Weisberg (1999) discusses differences in creative ideas, as true creative ideas being a break from what has come before. Hence, it is acknowledged that there is a significant difference between types, or eminence, of creative ideas. It is therefore the contention of this article that how, and what, cognitive structures, or domains, are integrated can provide a basis for understanding those differences.

## **Cognitive Differences in Big versus Small C Idea Development**

One piece of research that can assist in understanding the cognitive differences in big C versus little c creativity is that of Schilling (2005). Schilling proposes, in her ‘small-world’ network explanation of cognitive insight, that insight occurs when an atypical association is made through random associations. While Schilling notes that insights help us to solve both day to day problems, and acts as a basis for major scientific breakthroughs, the network model provides a basis by which connections of category elements based upon their degree of atypicality can explain major versus minor contributions. Ideas that are the result of more distant, or atypical, connections will result in more novel ideas than those that are the result of more typical connections, or part of the same category. Essentially, in relation to Schilling’s small world theory of insight, an insight or aha moment occurs when a person makes a previously unconnected unusual, or atypical, association. Then this new combination provides a short-cut for a whole lot of new connections between memory pathways to occur.

One additional point is needed to be made from the Schilling (2005) article in relation to the relative eminence of creative ideas. As described in her article, a new connection for a child might be a significant new insight leading to a range of new connections, while that same insight would not be viewed as significant to an adult. In other words, what is a significant, atypical connection for one person may be a known typical connection for someone else. This emphasizes the differences between individual and societal level creativity. A person may be making a creative connection that is a new combination at an individual level, but that is not new to society. For an idea to result in a big C breakthrough atypical memory connection must be made between memory categories that have not been associated in that way from a societal perspective.

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## **Age and Creative Eminence**

An additional significant piece of work related to the eminence of creative ideas, is the work of Lehman (1953). This work is cited here as it provides an insight into the importance domain specific knowledge might play in the degree of eminence of the creative idea generated. The work by Lehman analyzed the age at which individual’s accomplished different types of creative achievement and “...found that major contributions were most likely to occur in young adulthood, whereas minor contributions and net productivity were most likely to peak in middle age” (Mumford & Gustafson, 1988, p.29).

A conceptual review of the literature undertaken by Mumford and Gustafson (1988) identified a range of potential reasons for the Lehman finding. Included in their findings were that major achievements may be: a) linked to young people’s redefinition and reorganization of concepts due to a need to incorporate findings that were not explained well in the current field, b) the concern by

younger people to develop findings that fit in with broader societal needs, c) the limited experience of people new to a field meaning young people are more amenable to restructuring new information and combining it with the domain, and d) the fact that young adulthood is a time of significant change and accommodation. All of these four points point toward the importance of young peoples' emphasis on making very different, or atypical, combinations in their early career path. If those combinations are also atypical from a societal perspective, significant creative breakthroughs may occur.

Hence, combining the separate conclusions reached by Ghiselin (1963), Besemer and Traffing (1981), Mumford and Gustafson (1988), Gardener (1993), Perkins & Salamon (1988) and Weisberg (1999) - that minor and major creative contributions may be the result of different cognitive processes, with the research of Schilling (2005) and Lehman (1953), it is posited that the extent to which new ideas involve the combination of highly dissimilar domains, is a reasonable basis for the analysis of the degree of creative contribution of an idea. It does not, however, fully explain another finding by Lehman; why major contributions reduce, and minor contributions peak, in middle age.

The Mumford and Gustafson (1988) article put forward a number of arguments related to the finding that major contributions reduce and minor combinations peak in middle age, including; a) the findings by Neugarten (1968), and Gould (1978), that middle age brings an awareness of death and the focus on more attainable goals b) middle aged people have a strong knowledge of the issues facing the domain and therefore are in a position to address those problems, and c) well-developed cognitive structures may limit divergent combination of ideas due to their stability and automaticity of use (Barsalou, 1983). These findings, particularly points b and c, also support the contention that there are differences in cognitive processes undertaken in the development of major and minor contributions, and these differences relate to how domain knowledge is combined.

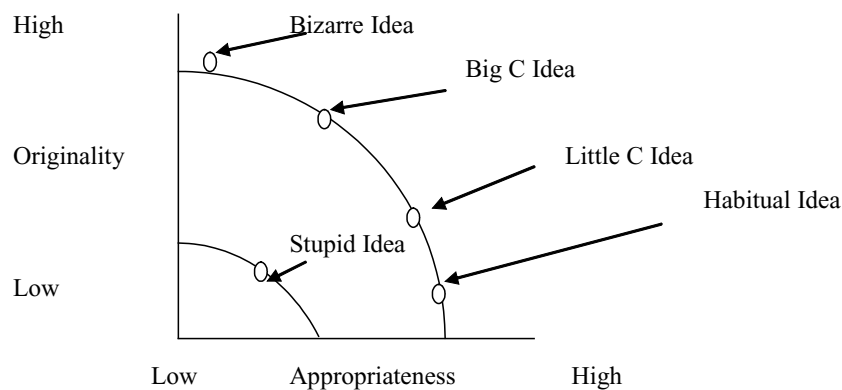
So while it is accepted that creative ideas are the result of some sort of divergent thinking process, combined with reorganization or combination processes, the process may differ for different degrees of creative outcomes. Authors, (Briskman, 1980; Ghiselin, 1963; Gardener, 1993; Sternberg & Lubart, 1996) refer to this concept of varying degrees of significance of creative ideas, using the terms 'eminent' versus 'minor' creative ideas. For the purposes of this article the terms big C, and little c, creative ideas are used.

### **Defining Big C versus Little c Ideas**

Nevertheless, there have been few attempts to define exactly what constitutes an eminent creative contribution versus ideas of a more limited contribution, or if, and how, their development requires different cognitive strategies and processes. The best way to describe the difference between the significance of creative ideas may be a continuum that relates the accepted creativity constructs - originality and appropriateness, with the concept of domains. For an idea to be creative it must be

perceived as being appropriate to the domain (Ford, 1996; Amabile, 1996). Additionally, the degree of perceived originality will vary dependent upon how similar that information is to an existing domain knowledge. The following diagram is proposed.

### The Creativity Frontier



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The above creative frontier diagram illustrates the basis for defining the degree of eminence of creative ideas. Big C ideas involve combining memories from different domains in a way that results in highly original and moderately-highly appropriate responses. As these ideas are likely to go beyond the current thinking in the field, they might not initially be viewed as highly appropriate. Small c ideas involve combining memories from similar domains in new ways that result in ideas that are highly appropriate but that will be viewed as only low to moderately original responses. Ideas that are merely the repetition of existing knowledge will be neither original nor appropriate - habitual idea. Ideas that are the result of combining new domains in ways that result in highly originality but inappropriate will be viewed as merely bizarre ideas.

While creative ideas require at least some degree of recombination that is different from what has been done before, the frontier positions combinations that involve memory categories within the same domain of knowledge as less original than those that combine highly dissimilar domains. These highly dissimilar domain combinations will change the parameters of the field itself, as these ideas will link cross domain knowledge.

Subsequently, in line with the conceptual underpinnings of Lehman (1953), Ghiseling (1963), Besemer and Traffinge (1981), Mumford and Gustafson (1988), and Gardener 1993, big C creative ideas and little c ideas may be the result of different cognitive processes. Additionally, in line with the domain based definition proposed, it is contended that big C ideas are the result of the combination of

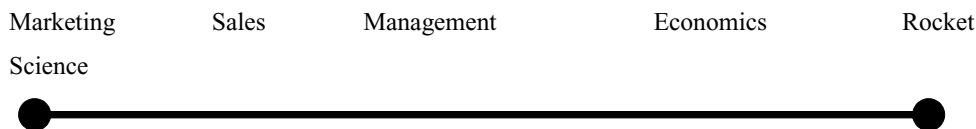
category memories from dissimilar domains, while small c creative ideas are the result of combining ideas from within the same domain in a new way. Essentially the difference in eminence of ideas relates to the extent to which the ideas merge dissimilar versus similar domains.

## **Domains and Creative Thinking**

A domain has been described as the conventional wisdom regarding a particular field of research, or as the rules, practices and language of a recognized area of action (Ford, 1996). Domains are constantly changing due to new creative ideas, for example Stone Age people would not have viewed the moon and the tides as relating to similar domains, but we are more likely to relate those two concepts today. In addition there are obvious connections between various areas of conventional wisdom or study, for example, marketing and sales. Therefore, the concept of a domain may be best described as a continuum of related concepts, with some domains more closely related than others. This provides a description of domains of knowledge that can assist in developing a sound understanding of the creative thinking process.

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### **The Domain Continuum**



Ideas that are the combination of dissimilar domains are likely to be viewed as highly original because other people would not have made that distant connection. Whether those ideas are viewed as creative or not will depend upon the extent to which the ideas are accepted as appropriate within the field (Ford, 1996). Therefore, creative thinking is initially a process of divergent thinking, and subsequently, of idea evaluation, refinement, and finally expression. However, the vast majority of ‘new’ ideas are probably the result of people making connections between mental elements that would fall within the boundaries of a societal domain rather than combinations from very disparate domains. Indeed, Schilling’s (2005) ‘small world’ network model proposes that the world is indeed a small place and, given that there are certain central nodes in memory, then most nodes will be connected by a relative short path length. Subsequently, while highly significant breakthroughs may require the connection of different domains - undoubtedly similarities will exist across them.

Therefore, this difference between the combination of similar and dissimilar domains acts as the basis for the generation of big C or little c creative outcomes. The cognitive processes and strategies that result in dissimilar versus similar domain combinations may be significantly different. However,



it is important also to make the distinction between creative thinking processes and creative outcomes, and this is largely dependent upon memory category combinations versus domain combinations.

## **Categories and Domains**

There is a difference between memory categories and domains. Categories are essential for understanding the individual cognitive processes that may or may not result in creative outcomes. Everybody has their own category knowledge that will differ at least slightly from that of other people because it is learned based upon their individual experience of the world around them. These categories will be similar, but not identical, to domains of knowledge, and it is these societal ‘domains’ which will be used to determine whether an idea is creative – both original and appropriate.

## **Individual Creative Thinking Processes versus Societal Creativity**

23 An individual may undertake creative thinking processes in so far as they are merging mental elements, or thought categories, from their memory to create a new combination. However, from a societal-domain perspective those ideas may not be original and therefore will not be viewed as creative. Boden (1991) discusses this in relation to psychological (P) and historical (H) creativity. Here P creativity is where an individual develops a new idea, irrespective of whether anyone else has developed that same idea. As long as the idea is new at an individual level it is P creativity. H creativity is ideas that are entirely new to humanity and hence no one else has made that combination prior to that H idea. From a measurement and developmental perspective it is important to recognize that there could be a significant difference between creative thinking processes and creativity.

Creative thinking processes might be occurring, but the results from those internal processes might not result in creative outcomes. Essentially, there is a need to recognize the difference between individual creative thinking processes and society-level creativity. An individual could be combining their own thought categories in new and original ways, but if these idea combinations are not new to the domain they will not be perceived as creative by society.

## **Measuring Individual Creative Thinking Processes versus Societal Level Creativity**

Ideas can be gauged as to their degree of creativity based upon the extent to which they differ on the two attributes, originality and appropriateness. However, a limiting factor will be the fact that domains of knowledge are not fixed entities and knowledge of domains differs from person to person. Because groups of people will have differing levels of domain knowledge that they use to evaluate

the degree of originality and appropriateness of ideas, each group will have a slightly different view of the degree of both the originality and the appropriateness of an idea (Hocevar, 1981).

This contention is in line by the findings of Koslow, Sasser & Riordan (2003) who found that different types of advertising employees had differing views on what constituted appropriateness. At a societal-level, with total knowledge of a domain, hypothetical ideas could be evaluated objectively as to the degree to which they bring in information from more distant domains. However, this is purely hypothetical, since we cannot evaluate ideas based upon the sum total of society's knowledge at any moment in time.

### **Domain Knowledge Boundaries**

Everyone's individual domain knowledge will differ and be a subset of society's aggregate domain knowledge. This causes difficulties for the measurement of creative ideas. When we evaluate creative ideas we do so based upon our existing knowledge of the domain - our related memory category. Subsequently, the more knowledge we have of a domain the less likely we are to evaluate the ideas of novices as original. This is because of the greater likelihood that we already possess knowledge of a similar solution. Therefore, even if those novices are combining domain knowledge in a new way at an individual level, and therefore undertaking creative thinking processes, the expert might not acknowledge those processes. We evaluate creative ideas based upon our own domain knowledge and not based upon the creative thinking processes that are being undertaken at an individual level by the idea generator.

### **Domain Specific Knowledge Based Evaluation of Originality and Appropriateness**

If a person knows of a solution and someone else provides that solution as a creative response then that idea would be evaluated as unoriginal and therefore, uncreative. If they were unaware of that response they would evaluate it as original. Subsequently, the measurement of 'originality' is often a subjective evaluation that does not necessarily reflect an idea generator's creative thinking processes. Using expert judges to evaluate creativity requires a determination of how the judge's knowledge biases their evaluation of a respondent's creative abilities.

Additionally, the appropriateness criterion is also a subjective criterion (Koslow, Sasser & Riordan, 2003). Any response will be evaluated based upon the judge's existing domain knowledge. An expert in one particular domain is likely to evaluate the appropriateness of an idea based upon how it fits in with their domain-specific evaluation criteria. Therefore, a creative marketing response might



not be evaluated as appropriate by an expert accountant - using cost based criteria, whilst another marketer might evaluate that same response as appropriate - using customer retention criteria.

At an individual level, highly original ideas will be ideas that merge ideas from domains that are not similar for that individual. Additionally, as groups within society organize themselves into areas of common interest and research, experts in any field will have relatively similar domain knowledge boundaries. Subsequently, we would expect ideas that combine generally accepted dissimilar domains to be viewed, at an aggregate level, as highly original. For a new idea to be a big C creative idea it must be original and appropriate at a societal domain level.

### **Domain Boundaries**

The obvious limitation of this theory relates to the definition of the boundaries of the domain. All ideas and concepts are related to some extent, and it is the extent of accepted difference between domains at any moment in time, at a societal level, that will influence the degree to which a new idea is viewed as original or not. It is a sad fact that the second person to develop the time machine will not be viewed as creative as the first creator, even if they developed the idea completely independently of each other, despite the fact, that as stated by Simonton (2003), these multiple discoveries are usually the result of socio-cultural processes. Indeed, Simonton (2003) noted the phenomenon of multiple discovery; where two or more scientists come up with the same concept simultaneous. Famous examples of multiple discovery include calculus and the theory of evolution (Simonton, 2003).

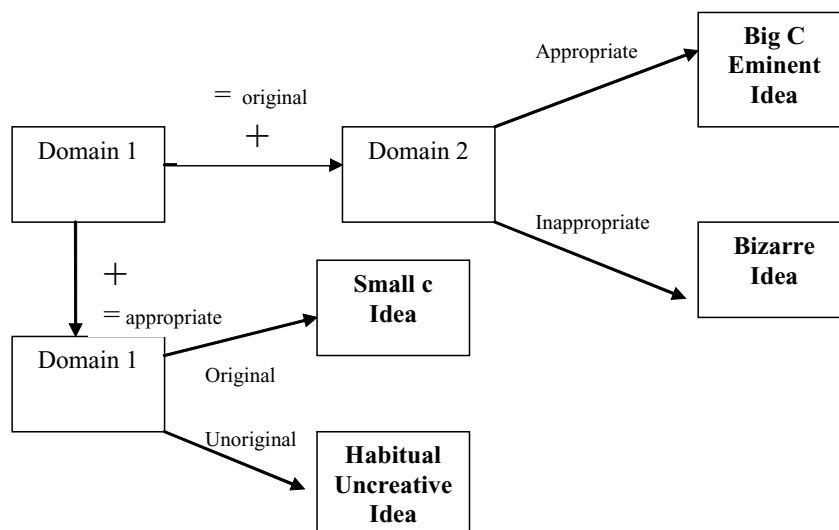
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Putting together concepts that in the past were not viewed as similar will result in the need to change how people organize their thoughts on a domain, and therefore will be viewed by others as highly original. If those ideas can also be shown to suit the context of the domain in which they are being applied, they will also be seen as highly appropriate. In trying to measure the degree of creativity of ideas we therefore need to account for the fact that an idea could be viewed as inappropriate because judges do not have the appropriate alternative domain knowledge with which to evaluate that new idea. This concept, in relation to the importance of field gatekeepers, is discussed by Nakamura & Csikszentmihalyi (2002). In their systems model of creativity the receptiveness of the field is viewed as a critical contributor to creativity. "Everyone is familiar with the case of a creative idea being ignored because the knowledge of the field lags behind that of the creator" (Nakamura & Csikszentmihalyi, 2002, p.339).

These factors have several implications for the study and measurement of creative thinking. First, eminent big C creative processes differ from minor small c creative processes - in that the former combine divergent domains at a societal level, while the latter combine similar domain knowledge in a new way. Second, an individual might be undertaking creative thinking processes, but these might not result in societal level creativity. Finally, that the measurement of creative thinking must account

for these factors as well as the fact that judges must not only evaluate the creative response, but also the reasoning behind that response as to its appropriateness. The first of these aspects is illustrated in the following model. It is important to note that this is a societal level model.

**Big C Eminent Creative Ideas versus little c Minor Creative Ideas – Societal Level Model**



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The model above illustrates the four combination options available to a person when generating an idea. What type of idea results from the idea generation process will be determined by whether combinations are made between ideas from within a domain, or ideas from different domains. Additionally, the extent to which those ideas are original or unoriginal ideas, from a societal perspective, will also influence the type of response that is generated. There are four categories of potential response; big C eminent ideas, bizarre ideas, small c ideas, and habitual uncreative ideas. It is important to note that the model is a societal level model. Essentially, the type of response that is generated will depend upon the cognitive thought processes that a person undertakes. It is also contended that these thought processes can be selected as cognitive strategies, and also learnt. This contention is given support by the increasing body of research showing the effectiveness of creative thinking techniques.

**Cognitive Strategy Choice and Creative Thinking Techniques**

The contention that big C creativity results from the combination of unusual domains and is a process that can be taught is given support by the research by Clapham (1997), which found that ideation skills

are the primary elements measured in tests of creativity, and research shows that creative thinking skills can be enhanced through training. The growing body of research into the effectiveness of creativity training (Stokes, 1999; Scott, Leritz, & Mumford, 2004; Clapman, 1997; Lemon, 2005; Nickerson 1999). supports the contention that there are processing commonalities required for creative thinking and that these might be internally selected cognitive processing strategies. In a quantitative review of the effectiveness of creativity training, Scott, Leritz, & Mumford (2004) concluded that such training was effective across a range of settings and target populations and the effectiveness of the training appeared attributable to the training providing strategies for respondents to apply when generating creative ideas. Indeed, Ward, Patterson and Sifonis (2004) have shown that the way people approach a creative idea generation can be varied. It seems plausible therefore to posit that creative thinking may be dependent upon the cognitive processing strategy selected by the individual, and that these strategies can be enhanced through the use of training.

Therefore a method to increase creativity would be the use of creative thinking techniques that facilitate dissimilar domain combinations processes deliberately. In order to encourage the generation of big C ideas, distant domain combination processes would be taught. Alternatively, to encourage the generation of small c ideas, within domain combination processes could be taught.

27 One such technique that encourages the combination of divergent domains is synetics, Gordon (1961). Synetics encourages divergent thinking by forcing respondents to make distant category connections. It is also evident that other creative thinking techniques have a similar influence on creative outcomes. Creative techniques, such as word associations or the use of metaphors, Wells, Burnett & Moriarty (2003), might well force a respondent to think across categories. The alternative to these divergent cross domain cognitive strategies, encouraged by these techniques, is the normal cognitive process whereby a respondent moves down their existing memory pathway to find a solution. Hence there are two cognitive strategy options: strategy one – cross memory connections, and strategy two within domain memory searches. For strategy one the response would be more original, but appropriateness scores would be lower, and the reverse is the case for the second strategy.

### **Two Types of Cognitive Processes Strategy: Cross Memory Connections Versus Domain Memory Searches**

It is posited that it is relatively easy to select, or switch, between the two different types of creative thinking processes during a creative thinking task, as long as the respondent knows how. If, for example, the task was to generate a list of round objects, then strategy one would involve domain thinking processes that merely involved searching their existing memory categories, starting with a common reference point, such as ‘round’ and presenting all related thoughts in that category that come to mind, for example, round ball, tennis ball, squash ball. For strategy two, where cross category

memory combinations need to occur, a respondent can bring in random unusual categories to link with the task question, for example, round could be combined with the idea ‘house’ results in doorknob, round window. Doctor and round results in swivel chair base, pills, making the rounds, etc. This would result in the combination of dissimilar domains.

Cognitive process selection relates to the proposition that a respondent is able to apply different processing strategies to a task – either cross category thinking processes or within domain information searches. Moreover the strategy that we apply may cause us to access more remote associations given instructions, or deliberate processing. Indeed, research by Tourangeau and Sternberg (1982) indicates that when people develop ideas based upon metaphors or analogies brought up in a category search; for example a car might represent freedom or pollution, they developed more novel ideas.

### **Differences in Creative Thinking Processes for big C and small c ideas**

The difference between these two cognitive strategies is important as it leads to the contention that there are very different, and deliberate, choices of thinking style, which can be used to solve a problem, based upon the type of outcome that is required. If we want a readily acceptable, defensible solution, then within domain thinking strategies should be used. If we want a radical solution, then cross domain thinking strategies should be applied. Stating that we can apply different thinking strategies to different tasks, even within the field of creative thinking research is not new. It has long been recognized that there are difference between types of creative thinking processes. Kirton (1976) discussed the concept of adaptability (the ability to do things better) and innovation (the ability to do things differently). Indeed, it may be that the requirements for big C versus little c creativity are in many respects contradictory to one another:

“The concept of incremental innovation is clearly different from the notion of radical change or a shift in paradigms. In fact, incremental innovation may actually serve to retard the development of decidedly new ideas, solutions, or products by focusing on minimizing variation in processes, products and services. This may be one reasons why Nystrom (1990) found that the most innovative division in his study also had a low orientation toward quality” (Tesluk, Farr & Klein, 1997, p.38).

Scott and Bruce (1994) also noted that systematic problem solving had a negative impact on innovative behaviour. However, despite the significant difference between incremental creativity and transformational creativity, most studies of creativity do not make any distinction between them in their measurement, and there has been little research into any differences. It is the contention of this article is that the best way to illustrate the difference between types of creative outcomes is to look at how domain knowledge is combined. Within-domain combination processes will result in small

c creative ideas, and dissimilar-domain combinations will result in bizarre or big C creative ideas. The first process requires convergent thinking and domain-specific knowledge, the second divergent thinking and knowledge of a range of different domains. Big C creative processes will change the parameters of the domain while small c ideas will expand the current domain.

## **Conclusions**

In conclusion while individually we are all capable of original ideas, as we make new combinations based upon our own domain-specific knowledge, most of these ideas will not be new at a societal level. Therefore, we are all capable, to differing extents, of creative thinking processes, but very few of us will have societal level creative ideas. Fewer still will have the resources or expression skills to attain support and recognition for those ideas and achieve creativity. However, it is contended that through the use of cognitive strategies we can enhance the likelihood of generating different types of creative ideas.

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In relation to big C and small c creativity, these two processes may require very different cognitive strategies. Small c creativity will require an extensive process of evaluation and re-evaluation of the existing information within a domain. From this analysis re-combinations and reorganization of information could lead to different combinations of existing domain knowledge. A focus on past information as the basis for idea development suits situations that require solutions that will be accepted, and where immediate implementation is a priority. This is the situation faced by many organizational personnel and academic researchers, "... relevant factual information may represent a fundamental requirement for creative problem solving in organizations" (Mumford, Whetzel, Reiter-Palmon, 1997, p.10).

Generating big C creative ideas may require a completely different focus than that of small c idea generation. To encourage big C thinking we would need to encourage people to look outside the domain to develop solutions that may initially not be viewed as appropriate by others. This type of thinking is hard to assess and high risk, but also high reward. However, it is critically important that we are able to make this distinction in the processing requirements as currently much of our education and training environments encourage within domain thinking strategies rather than across domain strategies. How we are teaching may well be limiting the potential for big C breakthroughs.

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## References

- Amabile, T.M., (1983), *The Social Psychology of Creativity*, New York: Springer-Verlag.
- Amabile, T.M., (1995), (Commentary) Attributions of Creativity: What Are the Consequences?, *Creativity Research Journal*, Vol 8, No: 4 pg 427-429
- Anastasi, L., (1988), *Psychological Testing 6<sup>th</sup> Edition*, Macmillian Publishing Company New York
- Baer J., (1998) Point Counterpoint, The Case for Domain Specificity of Creativity, *Creativity Research Journal*, Vol 11 No: 2, pp. 173-177
- Barsalou, L.W., (1983), Ad hoc categories, *Memory and Cognition*, Vol 11, No: 3, pp. 211-227
- Baughman, W.A. & Mumford, M.D., (1995), Process analytic models of creative capacities: Operations influencing the combination-and-reorganization process, *Creativity Research Journal*, Vol 8, pp. 37-62
- Besemer, S.P. & Treffinger, D.J., (1981), Analysis of Creative Products: Review and Synarticle, *Journal of Creative Behavior*, Vol 15, pp. 158-178
- Boden, M.A., (1992), *The Creative Mind: Myths and Mechanisms*, London: Cardinal,
- Briskman, L., (1980), Creative Product and Creative Process in Science and Art, *Inquiry*, Vol 23, No: 1, pp. 83-106
- Brown, A.S. & Murphy, D.R., (1989), Cryptomnesia: Delineating inadvertent plagiarism, *Journal of Experimental Psychology: Learning, Memory and Cognition*, Vol 15 pp. 432-442
- Bruner, J.S., (1957), What Social Scientists Say About Having An Idea, *Printers' Ink Magazine*, Vol 260, pp. 48-52



- Clapham, M.M., (1997), Ideation Skills Training: A Key Element in Creativity Training Programs, *Creativity Research Journal*, Vol 10 No: 1, pp. 33-44
- Coney J., & Serna, P., (1995), Creative Thinking From An Information Processing Perspective: A New Approach To Mednick's Theory of Associative Hierarchies, *Journal of Creative Behavior*, Vol 29, No: 2, 2<sup>nd</sup> Qtr, pp. 109-130
- Cropley, J., (2000), Defining and Measuring Creativity: Are Creativity Tests Worth Using?, *Roeper Review*, Vol 23, No: 2, pp. 72-80
- Csikssentmihalyi, M. & Epstein, R., (1999), A Creative Dialog, *Psychology Today*, Vol 32, No: 4, pp. 58-62
- DeBono, E., (1968), *New think: The use of lateral thinking in the generation of new ideas*. New York: Basic
- Engle, D.E., Mah, J.J. & Sadri, G., (1997), An Empirical Comparison of Entrepreneurs and Employees: Implications for Innovation, *Creativity Research Journal*, Vol 10, No: 1, pp. 45-49
- Feist, G.J. & Runco, M.A., (1993), Trends in the Creativity Literature: An Analysis of Research in the Journal of Creative Behavior, *Creativity Research Journal*, Vol 6, No: 3, pp. 271-286
- 31 Ford, C.M., (1996), A Theory of Individual Creative Action in Multiple Social Domains, *Academy of Management Review*, Vol 21, No: 4, pp. 1112-1142
- Frensch, P. A. & Sternberg, R. J. (1989). *Expertise and intelligent thinking: When is it worse to know better?*. In R. J. Sternberg (Ed.), *Advances in the psychology of human intelligence* (Vol. 5, pp. 157–158). Hillsdale, NJ: Erlbaum.
- Gardener, H., (1993), Seven Creators of the Modern Era, in J. Brockman (Ed.), *Creativity*, pp.28-48, New York: Simon & Schuster
- Getzels, J.W. & Csikszentmihalyi, M., (1975), Perspectives in Creativity, Aldine Publishing Company, Chicago
- Ghiselin, B., (1963), Ultimate Criteria for Two Levels of Creativity, in Taylor, C.W., & Barron F., (Eds.) *Scientific Creativity: Its Recognition and Development*, New York Wiley, pp. 30-43
- Gordon, J.J.W., (1961), *Synetics: The Development of Creative Capacity*, Harper & Row, Publishers, New York/Evanston/London
- Gould, R.L., (1978), *Transformations: Growth and Change in Adult Life*, New York: Simon & Schuster
- Gruber, H.E., (1974), Darwin on Man: A Psychological Study of Scientific Creativity, New York: Dutton

- Guilford, J.P., (1968), *Intelligence, Creativity and their Educational Implications*, Publisher Robert R. Knapp, San Diego, California
- Hocevar, D., (1981), Measurement of Creativity: Review and Critique, *Journal of Personality Assessment*, Vol 45, No: 5, pp. 450-464
- Jackson, P.W. & Messick, S., (1967), *Creativity and Learning*, Publisher Houghton Mifflin Company Boston
- Kasof, J., (1995), Explaining Creativity: The Attributional Perspective, *Creativity Research Journal*, Vol 8, No: 4, pp. 311-366
- Kim, S.H., (1990), *Essence of Creativity: A Guide to Tackling Difficult Problems*, Publisher Oxford University Press, New York Oxford
- Kirton, M., (1976), Adaptors and Innovators: A Description and Measure, *Journal of Applied Psychology*, Vol 62, No: 5, pp. 622-629
- Koslow, S., Sasser, S.L. & Riordan, E.A., (2003), What Is Creative to Whom and Why? Perceptions in Advertising Agencies, *Journal of Advertising Research*, Vol 43, No: 1, pp. 1-15
- 32 Kris, E., (1952), *Psychoanalytic Explorations in Art*, New York: International Universities Press
- Lehman, H.C., (1953), *Age and Achievement*, Princeton, NJ: Princeton University Press
- Lemons, G., (2005), When the Horse Drinks: Enhancing Everyday Creativity Using Elements of Improvisation, *Creativity Research Journal*, Vol 17, No: 1, pp. 25-36
- Lovett, M.C. & Anderson, J.R., (1996), History of Success and Current Context in Problem Solving, *Cognitive Psychology*, Vol 31, pp. 168-217
- MacKinnon, D., (1962), *The Study of Creative Persons: A Method and Some Results*
- Marsh, R.L., Landau, J.D. & Hicks, J.L., (1996), How Examples May (and may not) Constrain Creativity, *Memory and Cognition*, Vol 24, No: 5, pp. 669-680
- Marsh, R.L., Ward, T.B., & Landau, J.D., (1999), The inadvertent use of prior knowledge in a generative cognitive task, *Memory and Cognition*, Vol 27 No: 1, pp. 94-105
- McFadzean, E., (2000), Techniques to Enhance Creative Thinking, *Team Performance Management*, Vol 6, No: 3/4, pp. 62-73
- Mednick, S.A., (1962), The Associative Basis of the Creative Process, *Psychological Review*, Vol 3, pp. 220-232.
- Mumford, M.D., Baughman, W.A., Maher, M.A., Costanza, D.P. & Supinski, E.P., (1997), Process-



Based Measures of Creative Problem-Solving Skills: IV. Category Combination, *Creativity Research Journal*, Vol 10, No: 1, pp. 59-71

Mumford, M.D., Baughman, W.A., Threlfall, K.V., Supinski, E.P., & Costanza, D.P. (1996), Process-Based Measures of Creative Problem-Solving Skills: IV. Problem construction, *Creativity Research Journal*, Vol 9 No: 1, pp. 63-76

Mumford, M.D. & Gustafson, S.B., (1988), Creativity Syndrome: Integration, Application, and Innovation, *Psychological Bulletin*, Vol 103, No: 1, pp. 27-43

Mumford, M.D., & Mobley, M.I., Uhlman, C.E., Reiter-Palmon, R. & Doares, L.M., (1991), Process analytic models of creative capacities, *Creativity Research Journal*, Vol 4, pp. 91-122

Mumford, M.D. & Simonton, D.K., (1997), Creativity in the Workplace: People, Problems and Structures, *Journal of Creative Behavior*, Vol 31, No: 1, 1<sup>st</sup> Quarter, pp. 1-6

Mumford, M.D., Supinski, E.P., Baughman, W.A., Costanza, D.P. & Threlfall, K.V., (1997), Process-Based Measures of Creative Problem-Solving Skills: V. Overall Prediction, *Creativity Research Journal*, Vol 10, No: 1, pp. 73-85

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Mumford, M.D., Whetzel, D.L. & Reiter-Palmon, R., (1997), Thinking Creatively at Work: Organization Influences on Creative Problem Solving, *Journal of Creative Behavior*, Vol 31 No: 1, 1<sup>st</sup> Quarter, pp. 7-17

Nakamura, J. & Csikszentmihalyi, M., (2002), Catalytic Creativity, *American Psychologist*, Vol 56, No: 4, pp. 337-341

Neugarten, B.L., (1968), *Middle Age and Aging: A Reader in Social Psychology*, The University of Chicago Press, Chicago and London

Newstead, S.E., Thompson, V.A. & Handley, S.J., (2002), Generating Alternatives: A Key Component in Human Reasoning?, *Memory and Cognition*, Vol 30, No: 1, pp. 129-137

Nickerson, R.S., (1999), Enhancing Creativity, *Handbook of Creativity*, ed. R.J. Sternberg, Cambridge, U.K: New York : Cambridge University Press, pp.392-429

Perkins, D.N., & Salomon, G., (1988), Teaching for Transfer, *Educational Leadership*, Vol 46, No: 1, pp. 22-33

Plucker J.A., (1998) Point Counterpoint, Beware of Simple Conclusions: The Case for Content Generality of Creativity, *Creativity Research Journal*, Vol 11 No: 2, pp. 179-182

Plucker, J.A. & Runco, M.A., (1998), The Death of Creativity Measurement has been Greatly Exaggerated: Current Issues, Recent Advances, and Future Direction in Creativity Assessment, *Roeper Review*, Vol 21, No: 1, pp. 36-40

- Reid, L.N., King, K.W. & Delorme, D.E., (1998), Top-Level Agency Creative Look at Advertising Creativity Then and Now, *Journal of Advertising*, Vol 27, No: 2, pp. 1-16
- Reiter-Palmon, R., Mumford, M.D., O'Connor Boes, J. & Runco, M.A., (1997), Problem Construction and Creativity: The Role of Ability Cue Consistency, and Active Processing, *Creativity Research Journal*, Vol 10, No: 1, pp. 9-23
- Rothenberg, A. & Hausman, C.R., (1976), *Introduction: The Creativity Question*, ed. pp. 3-26, Durham, NC, Duke University Press
- Runco M.A., (2004), Creativity, *Annual Review of Psychology*, Vol 55, pp. 657-687
- Runco, M.A. & Charles, R., (1992), Judgments of Originality and Appropriateness as Predictors of Creativity, *Personality, Individual Differences*, Vol 15, No: 5, pp. 537-546
- Schilling, M.A., (2005), A "Small-World" Network Model of Cognitive Insight, *Creativity Research Journal*, Vol 17 No: 2 & 3, pp. 131-154
- Schoenfeldt, L.F. & Jansen, J.J., (1997), Methodological Requirements for Studying Creativity in Organizations, *Journal of Creative Behavior*, Vol 31, No: 1, 1<sup>st</sup> Qtr, pp. 73-90
- Scott, S.G. & Bruce, R.A., (1994), Determinants of Innovative Behavior: A Path Model of Individual Innovation in the Workplace, *Academy of Management Journal*, Vol 37, No: 3, pp. 580-607
- Scott, G.M., Leritz L.E. & Mumford, M.D., (2004), The Effectiveness of Creativity Training: A Quantitative Review, *Creativity Research Journal*, Vol 16 No: 4, pp. 361-388
- Scott, G.M., Lonergan D.C. & Mumford, M.D., (2005), Conceptual Combination: Alternative Knowledge Structures, Alternative Heuristics, *Creativity Research Journal*, Vol 16 No: 4, pp. 361-388
- Simonton, K.D., (1999), Creativity and Genius: In Pervin, L.A. & John, O., eds. *Handbook of Personality Theory and Research* (2<sup>nd</sup> Ed), pp 629-652, New York: Guilford Press.
- Simonton, K.D., (2003), Scientific Creativity as Constrained Stochastic Behavior: The Integration of Product, Person, and Process Perspectives, *Psychological Bulletin*, Vol 129, No: 4 pp 475-494
- Sternberg, R.J. & Lubart, T.I., (1996), Investing in Creativity, *American Psychologist*, Vol 51, No: 7, July, pp. 677-688
- Stokes, P.D., (1999), Learned Variability Levels: Implications for Creativity, *Creativity Research Journal*, Vol 12, No: 1, pp. 37-45
- Tanner, D., (2001), Applying Creative Thinking Techniques to Everyday Problems, *The Journal of Consumer Marketing*, Vol 9, No: 4, pp. 23-29

- Tenpenny, P.L., Keraizakos, M.A., Lew, G.S., & Phelan, T.P., (1998), Constraining effects of examples in a creative generation task, *Memory and Cognition*, Vol 21, pp. 837-845
- Tesluk, P.E., Farr, J.L. & Klein, S.R., (1997), Influences of Organizational Culture and Climate on Individual Creativity, *Journal of Creative Behavior*, Vol 31, No: 1, 1<sup>st</sup> Qtr, pp. 27-41
- Tourangeau, R. & Sternberg, R.J., (1982), Understanding and Appreciating Metaphors, *Cognition*, Vol 11, pp. 203-244
- Vaughn, R.L., (1983), Point of View: Creatives versus Researchers: Must They be Adversaries?, *Journal of Advertising Research*, Vol 22, No: 6, Dec/Jan pp. 45-48
- Ward, T.B., (1994), Structured Imagination: The Role of Conceptual Structure in Exemplar Generation, *Cognitive Psychology*, Vol 27, pp. 1-40
- Ward, T.B., Patterson, M.J. & Sifonis, C.M., (2004), The Role of Specificity and Abstraction in Creative Idea Generation, *Memory and Cognition*, Vol 16 No: 1, pp.1-9
- Wells, Burnett & Moriarty, (2003) *Advertising Principles and Practice 6<sup>th</sup> Ed*, Publisher Prentice Hall, Pearson Education International, Upper Saddle River, New Jersey
- 35 Weisberg, R.W., (1999), Creativity and Knowledge: A Challenge to Theories, *Handbook of Creativity*, ed. R.J. Sternberg, Cambridge, U.K. ; New York: Cambridge University Press, pp. 226-250
- Wiley, J., (1998), Expertise as mental set: The effects of domain knowledge in creative problem solving, *Memory and Cognition*, Vol 26 No: 4, pp. 716-730
- Worthern, B.R. & Clark, P.M., (1971), Toward an Improved Measure of Remote Associational Ability. *Journal of Educational Measurement*, Vol 8, pp. 113-130

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## **Creative Industries in Europe and Austria Definition and potential**

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### **Abstract**

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Creative Industries (CI) or Culture Industries have been recognised to possess significant economic potential and have, therefore, increasingly become object of public and policy discussion throughout Europe. Experts agree that CI constitute one of the few economic sectors for which a dynamic future development is to be expected - in spite of the fact that no distinct common estimations (in terms of figures and statistical indicators) can be derived as to this regard.

Since the end of the 1990s, studies about Creative Industries have been carried out all over Europe - both at national and regional levels and also cross-national analyses have been conducted. A comparison of the available publications shows that the understanding of the sector varies from country to country. From the viewpoint of quantitative/statistical analyses, it seems to be recommendable to establish a common definition of CI allowing supranational comparisons on the extent and potential of CI often wished for by scientists and politicians. However, at the same time it has to be pinpointed that CI are considerably influenced by their framework conditions in terms of historic and economic development (keyword: “path dependency”), justifying the application of divergent - country specific - definitions.

An international comparison of the importance of CI shows that the economic importance of Creative Industries is assessed to be similar throughout Europe - despite of different definitions and approaches for gathering the respective data. The share of businesses in the field of CI amounts to approximately one tenth of the businesses of the whole economy. Employment in CI shows a quota of about 4 % to 5 %. Exceptions are congested areas in which Creative Industries have a higher economic impact.

However, the economic potential of the sector is not yet fully exploited due to a set of hindering factors which could be ameliorated by targeted support from public side. Besides the already existing wide variety of subsidies, specific programmes are necessary - especially as regards the cooperation between CI and other economic sectors.

## **Introduction**

Creative Industries (CI) or Culture Industries have been recognised to possess significant economic potential and have, therefore, increasingly become object of public and policy discussion throughout Europe. Experts agree that CI constitute one of the few economic sectors for which a dynamic future development is to be expected - in spite of the fact that no distinct common estimations (in terms of figures and statistical indicators) can be derived as to this regard.

Throughout Europe studies about Creative Industries have been carried out with the aim of pinpointing the importance of this sector for the overall economy. The United Kingdom is a precursor in this respect. The first British report on CI<sup>1</sup> was published at the end of the 1990s with the attempt to measure the economic contribution of Creative Industries to the economy and to identify the opportunities and threats they faced. Furthermore, the document helped to draft an action plan for both, government and CI. (*Department for Culture, Media and Sport 2001*) Several European countries followed the British example. In Austria, the topic has been dealt with only comparatively recently. The Austrian Institute for SME Research released the “First Austrian Report on Creative Industries” in 2003. In 2006, the “Second Austrian Report on Creative Industries” was published. (*Mandl et al. 2003 and 2006*)

The main objective of the Austrian studies was to analyse the economic contribution and, consequently, the potential of CI. For this purpose, a distinct definition for the economic sector had to be created in a first step, taking into consideration the specific characteristics and situation in Austria - a country being fond of cultural tradition not only influencing the present development of CI, but the economy and the population as such. For this purpose, a substantial analysis of the various concepts of Creative and Culture Industries being applied in Europe has been conducted.

## **Definition approaches towards CI in Europe**

Since the end of the 1990s, studies about Creative Industries have been carried out throughout Europe - both at national and regional levels and also cross-national analyses have been conducted.

<sup>1</sup> Commonly referred to as “Mapping Document”, see below

A comparison of the available publications shows that the understanding of the sector, and even the terminology (Creative Industries vs. Cultural Industries) - varies from country to country and also within countries the definitions differ from region to region. Reasons for those differences are, for example, the historical development of countries/regions or different orientations concerning national cultural politics (keyword: “path dependency”<sup>2</sup>).

A **European** report was published in 2001 covering the topic “Exploitation and development of the job potential in the cultural sector” (MKW 2001). This study uses the term “Cultural Sector” and applies a wide spread definition of the sector including many industries. The NACE<sup>3</sup> divisions 22 publishing, printing and reproduction and 92 recreational, cultural and sporting activities are seen as cultural sectors. For calculating employees in cultural activities cultural occupations are combined with those cultural sectors. The reason for this is that there are cultural workers in non-cultural sectors and that cultural sectors also employ non-cultural workers.

At individual Member State level, the first “Creative Industries Mapping Document” (*Department for Culture, Media and Sport* 1998) was published in the **United Kingdom** at the end of the 1990s. An updated version of this analysis was published in 2001. In 2005, a “Creative Industries Economic Estimates Statistical Bulletin” was edited. According to the Mapping Document, Creative Industries are those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property. CI in the UK contain the fields of advertising, architecture, art and antiques market, crafts, design, designer fashion, film and video, interactive leisure software, music, performing arts, publishing, software and computer services, television and radio. As the (public) discussion on CI started so early in the UK, many other European countries oriented themselves on this definition when taking up analysis on their own CI.

One example for this is **Finland** where the first political discussions on CI also took place in the late 1990s, motivated among others by the report of the UK. The first two Finnish reports (1997 and 1998) describe the so called “*luovat toimialat*” (Creative Industries) but the term “*kulttuuriteollisuus*” (Culture Industries) is also used in Finland. As mentioned, the definition approach shows a considerable accordance to the British one, whereas the fields of design and the public sector are left out more or less.

Also the **Scandinavian** countries Sweden, Denmark and Norway have a growing interest in Creative Industries and place considerable attention to the British “archetype of definition”. In 2002, the Jenka network was founded to establish a leading position amongst the Nordic Countries within the knowledge field of Creative Industries by sharing knowledge and experiences across countries and sectors and by connection organisations and companies which are not usually in contact with

<sup>2</sup> Path dependency describes the opinion, that the technologic, economic, social etc. development of a region/community is influenced qualitatively and quantitatively by the historic development.

<sup>3</sup> NACE (nomenclature d'activité dans la Communauté Européenne) is the statistical classification of Economic Activities in the European Community.



each other. (*Nordic Jenka Creative Industries Network*) Within the network, it is also discussed to create a standardised definition of CI, but up to now the network has not yet created one.

About 20 reports about Cultural Industries have been published for individual **German** regions; however, no study analysing the whole country exists up to now. The term Cultural Industries that is used in the reports from North Rhine-Westphalia (*Ministry of Economic Affairs and Energy of the State of North Rhine-Westphalia*) prevails - therefore, a different approach than in the UK is taken. The definition contains all businesses and self employed persons that render services or produce or sell products for preparation, creation and protection of artistic production, procurement of culture and/or medial promulgation. At a more detailed level, a further distinction can be made into five sub-markets: the audio-visual market, the book, literature and press market, the art and design market (including architecture and advertising), audio-visual-media, and performing arts and entertainment.

Reports about Cultural Industries are also relevant in **Spain**. Since 1975, when the political system changed from a dictatorship to a democracy, Cultural Industries gained in importance. In the meantime they are seen as a generator of wealth. The Spanish report from 2004 assumes the following sectors as relevant concerning the definition of Cultural Industries: public libraries and archives, artistic and architectural cultural properties, publishing, plastic arts, performing arts, music and audiovisual arts.

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In **France** culture has been very important ever since. CI Studies (here, also the term “Cultural Industries” is dominant) focus on employment in the cultural sector and not as much on the classification of industries. Therefore, this “sector” is defined very broadly. However, if the term Cultural Industries is used, only the audiovisual field, publishing, multimedia and the phonomarket are concerned.

In **Switzerland** both terms - Creative and Cultural Industries - are used. The definition in the country report is quite narrow and does not include the “modern” fields of multimedia, software and fashion. The focus is on artistic production and cultural services from artists (music, literature, art, film and performing arts).

In contrary to Western Europe, the potential and importance of Creative Industries has been recognised only recently in Eastern Europe. The reason for this is that before the change to a free market economy the demand for “cultural goods” was not very distinctive. A crucial factor for dealing with the topic Creative or Cultural Industries in **Hungary** (both terms are equally used) was the possibility to nominate a European Capital of Culture for 2010. CI is seen as an engine for growth that has a positive impact on the international competitiveness. In general, all fields and activities that create immaterial or material products that are based on individual creativity belong to CI. The Hungarian definition relies on the British one; therefore, the included fields are almost identical.

## Austrian definition of Creative Industries

As the definitions of CI in Europe differ as shown above, the Austrian Institute for SME Research tried to create a definition for Austria that oriented itself on the existing ones of other countries. The purpose of this procedure was not to create another approach, but to facilitate cross-national comparisons.

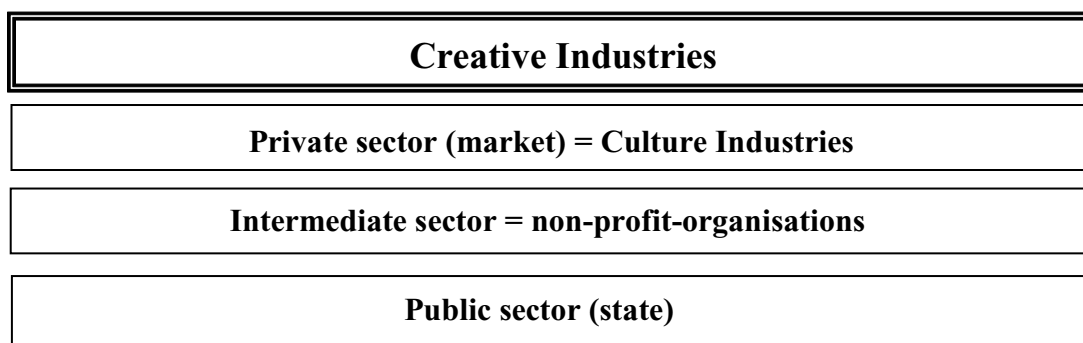
While some European countries (e. g. Spain, France) primarily deal with Culture Industries (private sector), the authors of the Austrian reports on CI decided to focus on Creative Industries (private sector + NPOs + public sector). The main reason for opting for this approach is the enormous impact of the public sector in Austria. As in Germany and Switzerland, for example, a “tri-sector model” distinguishing between the public, intermediate and private sector was applied:

- ✓ The public sector covers public cultural businesses like operas, museums or theatres.
- ✓ The intermediate sector consists of non-profit organisations (e. g. associations, foundations).
- ✓ The private sector covers private entities active in the production (and distribution) of creative goods and services.

All three fields fulfil other tasks and functions, but they are dependent from each other and exchange with each other continuously.

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**Chart 1.** Tri-sector model of Creative Industries



Source: Heinrichs 1997, 41ff

In Finland, a similar concept can be found. Here the term “Creative Industries” covers (like in Germany and Switzerland) in the first instance the private industries. For the public and the intermediate sector other terms exist (“kulttuuriala”).

Parallel to the “tri-sector model”, Austria has adopted a more “content-oriented” definition in accordance with the so-called LIKUS*aktiv*©-scheme. In this respect, the following fields have been classified as appertaining to Austrian Creative Industries, each with various sub-categories:



**Table 1**      **LIKUSkreativ<sup>®</sup>-domains and categories**

LIKUSkreativ <sup>®</sup> -domain	LIKUSkreativ <sup>®</sup> -category
Cultural heritage	Museums, archives, science Historical monuments and sites Folk arts, local history and customs Libraries
Performing arts	Music Theatre, opera, musicals, dance
Audio and audiovisual	Film, cinema, video Radio, television New media
Visual arts	Fine arts, photography Architecture Applied arts, graphic arts, design
Books and press	Literature Newspaper, periodicals
Interdisciplinary	Initiatives, cultural centres Training, further education Adult education International exchange Large-scale events Administration
Source: Mandl et al. 2006, 34	

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The tri-sector model and the LIKUSkreativ<sup>®</sup>-scheme shall not be seen as two oppositional concepts to define Creative Industries. In fact, they are two overlapping and connecting approaches. The different LIKUSkreativ<sup>®</sup>-domains include elements from the private, intermediate and public sector. Nevertheless, the private sector of CI mainly refers to the audio and audiovisual field, visual arts and the field of books and press while cultural heritage and the interdisciplinary field are to be attributed to the intermediate and public sector, respectively. The actors in the field of performing arts are active in all three “sectors. Thereof, it may be seen that an exact allocation between those three levels cannot be made as no distinct borderlines may be defined.

With the aim of providing statistical data on Austrian Creative Industries and against the background that CI constitute a “cross-sector phenomenon along the value chain” for which no specific data are available, the authors of the Austria reports on CI chose the approach to rely on publicly available economic data (based on the NACE classification<sup>4</sup>) and elaborate a conversion scheme between NACE and LIKUSkreativ<sup>®</sup> to provide quantitative information on the private sector of CI. Thereby, some of the chosen NACE branches had been added completely (e. g. architectural activities, creation of advertising campaigns), others like retail sale of books, magazines and newspapers or

<sup>4</sup> NACE (nomenclature d'activité dans la Communauté Européenne) is the statistical classification of Economic Activities in the European Community

publishing of software just partly. The “creative” percentage of these industries was identified by interviewing experts. It has to be noted that the production of real assets and wholesale and retail trade had not been considered in most parts as the share of creative activity (e. g. for sales persons) can be assessed as not substantial.

The data availability for the public and the intermediate sector is more problematic. Different sources have to be used for exemplary illustration as no systematic and/or continuous data collection is conducted so far. Consequently, describing the whole impact of those CI fields is not possible.

### **Overview on definition approaches**

The following table provides an overview on the different definition approaches of Creative (or Cultural) Industries in Europe. The economic importance and the employment potential are identified in all studies, but due to the different definitions and classifications of the sector direct comparisons are not possible. It has to be noted that - although a first examination gives the impression that the definitions only vary little - on closer investigation the different fields of CI are defined either in a very broad or narrow way and, furthermore, the classification of subcategories is heterogeneous. For example, in Switzerland archives and libraries are part of the book and press market while in Austria those fields are part of cultural heritage.

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The Austrian Institute for SME Research noticed that while the audio-visual field, performing arts, books and press and music economy are part of Creative Industries in all analysed studies other fields like advertising, design or multimedia are not taken into consideration in all publications.

**Table 1 Comparing overview about definition approaches of Creative Industries in Europe**

	UK	Austria	Finland	Germany	Spain	France		EU	Switzerland	Hungary	
Term used	<i>Creative Industries</i>	<i>Creative Industries Austria/Vienna</i>	<i>Creative Industries</i>	<i>Culture Industries</i>	<i>Culture Industries (Industrias culturales)</i>	<i>Culture Industries (Industries Culturelles)</i>	<i>Cultural Sector (Secteur culturel)</i>	<i>Cultural Sector</i>	<i>Culture or Creative Industries</i>	<i>Culture or Creative Industries (often used synonymously)</i>	
<b>Industry</b>											
Architecture	x	<i>Visual arts</i>	x	x	x (excl. Cologne)			x	x	x	x
Archives	x	<i>Cultural heritage</i>	x			x		x	x	<i>Literature/publishing</i>	x (Culture Industries)
Audio-visual field (film, TV, radio)	x	x	x	x (media)	x	x	x	x	x	x	x
Libraries		<i>Cultural heritage</i>	x			x		x	x	<i>Literature/publishing</i>	x (Culture Industries)
Performing arts	x	x	x	x (theatre)	x	x		x	x	x	x
Design	x	<i>Visual arts</i>	x ( <i>and graphic arts</i> )		x (NRW, Aachen, Cologne)				x	x	x
Craftwork	x			x	x (Hesse)					x	x
Art market	x	<i>Visual arts</i>	x		x			x		x (+ <i>fine arts</i> )	x
Literature / publishing	x	x	x	x	x	x	x	x	x	x	x
Fashion	x		x	x							x
Multimedia	<i>Interactive computer-services</i>	<i>Visual arts</i>	x		x (Berlin)	x	x		x		<i>Interactive computerservices</i>
Museums		<i>Cultural heritage</i>	x		<i>Cultural heritage / art market (Aachen)</i>	x (and cultural heritage)		x	<i>Cultural heritage</i>	<i>Art market</i>	x (Culture Industries)
Music industries	x	<i>Performing arts</i>	x	x	x	x			x	x	x
Phono market <sup>1</sup>					x (NRW, Aachen)		x	x		x	
Software	x		x	x	x (Berlin)						x
Visual arts		+ <i>Fine arts</i>	<i>Fine arts</i>			x			x		
Advertising	x	x	x	x	x				x	x (Zurich)	x
Source	Department for Culture, Media and Sport 1998	Austrian Institute for SME Research/ Institute of Culture Management and Culture Studies 2003		Wilenius 2002	Backes 2005; MWME NRW 2001; Mühlhans, et al. 2005; Piesk and Werner 2003; City of Cologne 2000	Bonet et al. 2002; Real Instituto Elcano 2004	Benhamou 2003	Ministère de la culture et la communication 2005	MKW 2001	Weckerle and Söndermann 2003 and 2005	Szokolai 2005

Source: Mandl et al. 2006, 30f

<sup>1</sup> Phono market is in some studies included separately whereas it is part of music industries in other studies.

## The question of harmonisation

Now that the inconsistency of the definition approaches throughout Europe became obvious the question of harmonisation arises:

*Should there be a standardised definition of CI applicable all over Europe?*

It seems to be recommendable to establish a common definition of CI allowing supranational comparisons often wished for by scientists and politicians.

### *Jenka network*

*For this purpose, for example, the already mentioned Jenka network was launched in Sweden, Denmark and Norway in 2002. One aim of this network is to derive a common definition for the Scandinavian Creative Industries.*

*“All over the world, the significance and potential of the Creative Industries are being realised but we do not share an understanding of what the Creative Industries are. This prevents us from fully collaborating to develop its potential. Jenka helps create a shared understanding of the Creative Industries across the Nordic region.” (Nordic Jenka Creative Industries Network)*

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However, at the same time it has to be pinpointed that CI are considerably influenced by their framework conditions in terms of historic and economic development (keyword: “path dependency”), justifying the application of divergent - country specific - definitions.

### **Excursus: Harmonised statistical basis**

There is neither a European uniform definition of CI nor are there corresponding standardised statistics at European level which can serve as a basis for empirically describing the developments in the sector. (MKW 2001) As already mentioned CI are a cross sectoral area of different industries along the value chain. The creative percentage of statistically defined industries can range from 0 % to 100 %.

To create a standardised European statistical basis for describing Creative Industries in figures several considerations have to be made.

1. First of all, data availability is a prerequisite. Data, like number of businesses, employees or turnover, must be accessible. Data suppliers could, for instance, be the national statistical institutions of each country.
2. Furthermore, the figures about CI have to be comparable: comparisons between countries and regions must be possible. For this purpose the European classification NACE<sup>5</sup> may be taken as a basis.

3. Besides these two points it is a precondition that the data must be released on a regular basis. Otherwise time series can not be made and, consequently, the development of Creative Industries can not be pinpointed.

It might be seen as a very conservative way to use data from official statistics but this seems to be the only possibility to have access to time series of data that are comparable all over Europe at the moment. Problems that can arise are among others changes in the definition of industries like the NACE revision 2003. Such modifications must be dealt with, for instance, by recalculation of data. Another barrier is that for some NACE sectors data is not surveyed regularly. For example, in Austria the last available data for personal services are from 2001. The next survey planned should take place in 2011. Here, estimations have to be made, if a focused survey can not be carried out.

### **International comparison of the importance of CI**

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Finally, an overview about the importance of Creative Industries in European countries should be given. It has to be noted that (as mentioned above) due to the different definitions and classifications of the sector as well as different methods of compiling the respective data, direct comparisons are not possible.

#### **Companies**

In **Austria**, about 28,700 businesses were working in the field of CI in 2004. The “creative” share in the whole economy’s private sector amounted to almost 10 %. (*Mandl et al. 2006, 4ff*)

A comparatively low share can be found in the **United Kingdom** with about 7 % in 2004. However, it has to be noted, that this figure only takes registered companies into consideration. That means that especially smaller businesses are not included. Consequently, the actual share is supposed to be higher. (*Department for Culture, Media and Sport 2005<sup>6</sup>*)

In **Germany**, the share of CI companies in the whole economy ranges from 8 % in North Rhine-Westphalia up to 11 % in Aachen.

**Switzerland’s** creative share in enterprises amounts to almost 9 %. In Zurich the share is definitely higher (more than 15 %). This is an indicator for the higher importance of Creative Industries in congested areas. (*Weckerle and Söndermann 2005, 14*)

<sup>5</sup> NACE (nomenclature d'activité dans la Communauté Européenne) is the statistical classification of Economic Activities in the European Community.

<sup>6</sup> The data for the United Kingdom are taken from the “Creative Industries Economic Estimates Statistical Bulletin” (2005). These statistics are based on the “Creative Industries Mapping Document” from 2001. It has to be noted, that all figures are estimations.

## Employment

The **Austrian** CI companies employed almost 102,000 persons in 2004. About 4 % of all employees of Austria were working in the Creative Industries. Although the majority of CI enterprises may be considered to be micro enterprises (and the share of sole proprietors' is considerably higher in CI than in the economy on average) the future employment effect of the sector must not be neglected (key word: increasing number of employees in the framework of the company life cycle as CI companies are in many cases rather "young"). (*Austrian Institute for SME Research/Institute of Culture Management and Culture Studies* 2006, 4ff)

Creative Industries also play an important role in **Finland's** employment. In 2000 about 5 % of the Finish employees were working in cultural positions or in Creative Industries (*Wilnius* 2004, 29ff).

In **German** regions about 3 to 4 % of all employees were working in Creative Industries. In Berlin, however, the share amounted to more than 8 %.

In 2001, the share of employees working in CI in **Switzerland** amounted to almost 4 %. The percentage of Zurich's "creative" employees was - like the percentage of CI businesses - much higher (6.6 %). (*Weckerle and Söndermann* 2005, 14)

The comparatively high shares of Berlin and Zurich are, again, an indicator for the importance of Creative Industries in congested areas.

## Turnover

Turnover of CI in 2004 amounted to approximately € 18.3 billion in **Austria**. This corresponds to a share of 3.5 % in the whole economy's turnover. (*Mandl et al.* 2006, 4ff)

According to *Hietanen et al.* (2005, 5) the turnover of CI in South-West **Finland** amounts to more than € 1 billion each year. That is more than twice the biotechnology sector. Another estimation from *Alanen* (2004, 1) assumes that the share of CI in gross domestic product will increase only slightly in the next years. During the next decade it should amount to approximately 4 %.

Creative Industries' share on the **United Kingdom's** GDP amounted to approximately 8 % in 2003. Between 1997 and 2003 an annual increase of about 6 % was measured while the total economy grew by 3 % p.a. (*Department for Culture, Media and Sport* 2005)

Turnover of **Swiss** Creative Industries amounted to € 21.3 billions in 2001. The share in the total turnover of Swiss companies adds up to 3 %. In Zurich, the "creative" share constitutes 4.3 % of total turnover. (*Weckerle and Söndermann* 2005, 14)

In 2003, the "creative" share in the **Spanish** GDP amounted to 4.5 %. (*Ministerio de Cultura* 2003, 1)



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**Table 3** Overview<sup>1</sup> about data of Creative Industries from selected studies, share of Creative or Culture Industries in the overall economy in percent

	title	companies	persons employed	turnover	GDP
Austria <sup>7</sup>	Creative Industries, 2004	9.6	4.3 <sup>8</sup>	3.5	5.1 <sup>3</sup>
Finland	Creative Industries, 2000 Culture Industries, 2004		5.0		4.0
Germany <sup>4</sup>					
Aachen <sup>5</sup>	Culture Industries, 2003	11.0	3.5	4.3	
North Rhine-Westphalia <sup>5</sup>	Culture Industries, 2003	8.0	3.1	3.2	
Berlin	Culture Industries, 2002		8.2	10.5 <sup>6</sup>	
Hesse <sup>5</sup>	Culture Industries, 2000	9.8	3.8	4.9	
Spain	Creative Industries, 2003				4.5
Switzerland <sup>9</sup>					
Switzerland	Creative Industries, 2001	8.7	3.9	1.9	3.0
Zurich	Creative Industries, 2001	15.2	6.6	3.2	4.3
United Kingdom	Creative Industries, 2005 <sup>1</sup>	7.1 <sup>2</sup>			7.8 <sup>3</sup>
Remark: Due to different definitions and calculation methods a comparison between the studies is only possible to a limited extent. No data for Hungary available.					
<sup>1</sup> These statistics are based on the "Creative Industries Mapping Document, 2001". It has to be noted that all figures are estimations. <sup>2</sup> The actual share is likely to be higher since in the Inter Departmental Business Register which is used for these statistics only companies that are declared for VAT are registered. That means that especially smaller businesses are not included. <sup>3</sup> gross value added <sup>4</sup> employed persons that are subject to social insurance contribution <sup>5</sup> taxable businesses <sup>6</sup> share of turnover in GDP <sup>7</sup> excl. agriculture and forestry <sup>8</sup> employees (excl. self employed) <sup>9</sup> work places instead of businesses					
Sources: Mandl et al. 2006; Backes,Holzer and Söndermann 2005; Department for Culture, Media and Sport 2005; Hietanen et al. 2005; Ministerio de Cultura 2003; Mühlhans et al. 2005; Piesk and Werner 2003; Wilenius 2002; Weckerle and Söndermann 2005					

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Concluding, it can be said that - despite of different definitions and approaches for gathering the respective data - the economic importance of Creative Industries is assessed similarly in the studies analysed. The share of businesses in the field of CI amounts approximately to one tenth of the businesses of the whole economy (only in Zurich a clear higher figure is estimated). Employment in CI shows a quota of about 4 % to 5 % (again Zurich, but also Berlin, have higher shares). However, the economic potential of the sector is not yet fully exploited due to a set of hindering factors.

## Obstacles for CI and recommendation of measures

The Austrian Institute for SME Research noticed that the growing dynamics of the sector in Austria are limited by several problems. The identified obstacles concern Austria but it can be assumed that they are also valid for the rest of Europe.

A basic requirement for benefiting from the potential of CI is a definition of the sector that allows a **current observation**. Especially politicians need facts and figures they can rely on when deciding whether to support a specific sector. For this purpose a statistical basis is needed as discussed earlier in this paper. The lack of data availability is an obstacle in this respect. A regular comparison of the figures of the sector is a precondition for monitoring the development. Actors that (at least theoretically) dispose of data must be sensitised to systematic surveys and publications. Furthermore, more field research on topics for which no data are yet available could be carried out.

In Austria, there exists a wide range of **subsidies** for Creative Industries. However, from the viewpoint of creative individuals the market is relatively inscrutable. This is an indicator for the lack of information creative businesses have and for the complexity of the market for subsidies. A proposal is, for instance, an internet-platform which lists the access criteria for the particular target groups. At the same time such a platform must be communicated widely (e. g. at events, mailings etc.). This also applies to the available individual measures as it can be assumed that at least a part of the target group does not feel addressed by them.

Another problem is the fact that creative individuals often do not perceive themselves as entrepreneurs and **lack of economic/market oriented know-how**. In this context qualification measures are recommendable (e. g. like the British Entrepreneurship training in the CI sector). Another approach would be the creation of a network of “economic” experts that are giving advice to creative individuals (e. g. tax or management consultants).

The average size of CI businesses is very small (as measured by employees per company). In general, especially such micro enterprises have **limited access to capital**. Consequently, access to capital is another obstacle in the sector of Creative Industries. Seed-financing or Venture Capital are possibilities that could be supported from the public authorities to reduce the burden of increase of equity capital. Another possibility would be the creation of a foundation centre or so called “incubators”.

The following conclusions of the Second Austrian Report on CI concerning **co-operations** can be drawn: In general, there is high co-operation intensity in the field of Creative Industries whereby the term co-operation is defined very broadly. Creative clusters are built up almost permanently. As the importance of social networks in CI is higher than in the whole economy, social aspects are a typical attribute of creative clusters. Another typical attribute of CI clusters is that they can be built up just temporarily (e. g. for the duration of a festival).

As the term **cluster** is not in every creative individual's mind yet, an information campaign should be started, followed by workshops and trainings. As a consequence the advantages of cluster management could lead to successful CI projects and initiatives in the long run. The next step could be the combination of existing clusters to an umbrella association. This would lead to more awareness and importance in national and international context.

Concerning the **networking** of CI with traditional branches a developable economic potential exists. To make use of it, first of all the entrepreneurs working in traditional fields<sup>7</sup> and the actors in Creative Industries have to be sensitised. In many cases both sides are not aware of the advantages of working together. Reservations between traditional and Creative Industries have to be abolished and appreciation has to be developed. This could presumably be done in an effective way by presenting good practices. Another possibility is to prefer multi disciplinary teams when allocating subsidies or awarding public procurements.

<sup>7</sup> i. e. all industries not belonging to CI

## Literature

- Alanen, Aku.* 2004. Taiteilijapolitiikka ja luovuus (Art politics and Creativity). Jyväskylä: University of Jyväskylä.
- Backes, Christoph, Barbara Holzer, and Michael Söndermann.* 2005. Kulturwirtschaft in Aachen. Erstes kulturwirtschaftliches Portrait einer Stadt in Deutschland (Cultural Industries in Aachen. First cultural economic portrait of a city in Germany). Aachen: Gründerzentrum Kulturwirtschaft.
- Benhamou, Françoise.* 2003. L'économie de la culture (The economy of culture). Paris: Éditions la Découverte.
- Bonet, Lluís, Albert de Gregorio, and Anna Villarroja.* 2002. Handbook on the Cultural Industries of Catalonia. Summary and conclusions. Barcelona: Institut català de les industries culturals/ Universitat de Barcelona.
- City of Cologne.* 2000. Kulturwirtschaftsbericht Köln (Report on Cultural Industries Cologne). Cologne: City of Cologne.
- Department for Culture, Media and Sport.* 2005. Creative Industries Economic Estimates Statistical Bulletin. London: Department of Culture, Media and Sports.
- Department for Culture, Media and Sport.* 2001. Creative Industries. Mapping Document 2001. London: Department of Culture, Media and Sports.

- Department for Culture, Media and Sport.* 1998. Creative Industries. Mapping Document 1998. London: Department of Culture, Media and Sports.
- Frank, Björn.* 2005. Kreativbranchen in Berlin (Creative Industries in Berlin). Wochenbericht des DIW Berlin 44/2005. 665-670. Berlin: DIW.
- Heinrichs, Werner.* 1997. Kulturpolitik und Kulturfinanzierung: Strategien und Modelle für eine politische Neuorientierung der Kulturfinanzierung (Cultural Politics and Financing: Strategies and Modells for a political reorientation). Munich: C.H. Beck.
- Hietanen, Olli, Leena Jokinen, Anna Kirveennummi, Saara Taalas, and Kari Toivonen.* 2005. Varsinais-Suomen luovat toimialat (Creative Industries in Southwest-Finland). Turku: Turku School of Economics and Business Administration.
- Kalmár, Monika, Günter Kernbeiß, Ursula Lehner, Roland Löffler, and Michael Wagner-Pinter.* 2005. Kreativwirtschaft: Nutzt Tirol seine Chancen? (Creative Industries: Is Tyrol using ist Chances?). Innsbruck: Zukunftszentrum Tirol.
- Mandl, Irene, Karin Gavac, Ernst Gittenberger, Franz-Otto Hofecker, Isabella Kamptner, Gregor Kremser, Caroline Krupp, Irene Mandl, Sabine Peternell, Romy Sagmeister, Peter Voithofer, Nadine Wille, Christina Wolf.* 2003. Erster Österreichischer Kreativwirtschaftsbericht (First Austrian Report on CI). Vienna: Federal Chancellery, Federal Ministry of Economics and Labour of the Republic of Austria, Austrian Federal Economic Chamber.
- Mandl, Irene, Aliette Dörflinger, Karin Gavac, Kerstin Hölzl, Caroline Krupp, and Heimo Konrad.* 2006. Zweiter Österreichischer Kreativwirtschaftsbericht (Second Austrian Report on CI). Vienna: Federal Chancellery, Federal Ministry of Economics and Labour of the Republic of Austria, Austrian Federal Economic Chamber.
- Ministère de la culture et la communication.* 2005. L'emploi culturel dans l'Union Européene en 2002 (Cultural employment in the European Union in 2002). In: Les notes de l'observatoire de l'emploi culturel 39, June 2005. Paris: DEP.
- Ministry of Economic Affairs and Energy of the State of North Rhine-Westphalia.* 2002. 4<sup>th</sup> Culture Industries Report. Düsseldorf: Ministry of Economic Affairs and Energy of the State of North Rhine-Westphalia.
- MKW Wirtschaftsforschung GmbH.* 2001. Exploitation and Development of the Job Potential in the Cultural Sector in the Age of Digitalisation. Munich/Vienna: MKW/European Commission.
- Mühlhans, Tanja, Wolfgang Abramowski, Cornelia Dümcke, Anne Rottig, Rainer Schmock-Bathe, and Konrad Schmidt-Werthern.* 2005. Kulturwirtschaft in Berlin Entwicklung und Potenziale (Cultural Industries in Berlin Development and Potentials). Berlin: Senatsverwaltung für Wirtschaft, Arbeit und Frauen/Senatsverwaltung für Wissenschaft, Forschung und Kultur.
- Nordic Jenka Creative Industries Network. <http://www.jenka.org/>
- OECD, European Commission, United Nations, World Tourism Organization.* 2000. Tourism Satellite Account: Recommended Methodological Framework. New York: OECD publishing.

- Piesk, Susanne, and Bernd Werner.* 2003. Kulturwirtschaft in Hessen. 1. Hessischer Kulturwirtschaftsbericht (Cultural Industries in Hesse. 1<sup>st</sup> Hessian Cultural Industries Report). Wiesbaden: Hessian Ministry for Economic, Transport and land use planning, Hessian Ministry for Science and Arts.
- Ratzenböck, Veronika, Katharian Demel, Robert Harauer, Günther Landsteiner, Rahel Falk, Hannes Leo, Gerhard Schwarz.* 2004. Untersuchung des ökonomischen Potenzials der „Creative Industries“ in Wien (Survey of the economic potential of „Creative Industries“ in Vienna). Vienna: City of Vienna (MA 27)/Chamber of Commerce Vienna/Filmfonds Wien.
- Real Instituto Elcano.* 2004. La Política Cultural en Espana (Cultural politics in Spain). Madrid: Real Insituto Elcano.
- Szokolai, Zsolt.* 2005. A kultúra mint gazdaságfejlesztési csodafegyver? (Cultur – a magic instrument for economic development?). Ekhó, Pécs, 2005, 10-12.
- Weckerle, Christoph, and Michael Söndermann.* 2005. Kreativwirtschaft Zürich (Creative Industries Zurich). Zurich: Hochschule für Gestaltung und Kunst.
- Wilenius, Markku.* 2004. Luovaan talouteen: Kulttuuriosaaminen tulevaisuuden voimavarana (Towards a creative economy: Cultural know-how as a future resource). Helsinki: Edita Publishing.

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## **Bridging Innovation Systems between Northern Finland and Sweden**

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### **Abstract**

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This paper presents the existing cross-border co-operation between innovation systems in Northern Finland and Sweden with some practical cases. As part of the development of the Bothnian Arc co-operation the universities in the region drew up a plan called the Knowledge Arc. In the paper published in 2002 several cross-sectional shared interest areas were defined and further actions planned.

In this paper the co-operation between research, SME companies and industries is presented with cases including product development between companies and assisted by universities and other organisations as well as company-initiated applied research between universities, companies and technology park companies.

On the innovation system level the case of expanding Swedish ProcessIT Innovation system to Finland is described and discussed. This system takes advantage of research-industry-SME collaboration in applied research and product development based on strong, modern process industry cluster covering the whole Bothnian Arc region with a total turnover of 30 000 million euros. The industries make a good local sophisticated customer for the development phase.

Co-operation in innovation systems has also begun in innovation research. Two researchers are working on technology park questions with doctoral dissertations as their goal and simultaneously searching for good practices and functions to be developed especially in smallish parks outside the major university towns. The second task in the project is joint research school operation; special seminars have and will be arranged. The third goal is to develop joint European co-operation.



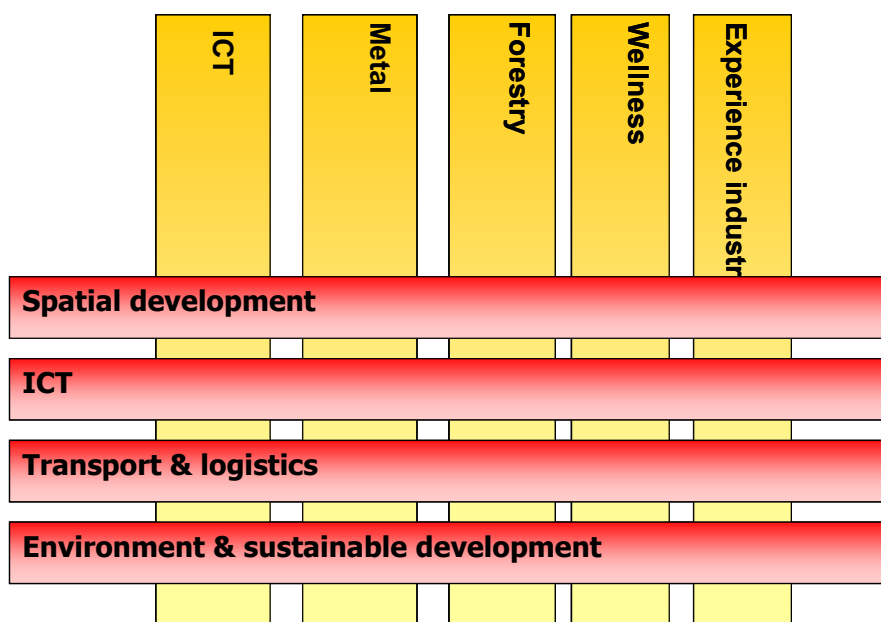


while in Northern Sweden the base is closer to end-user companies. One example of this is the ProcessIT Innovation network coordinated by Luleå Technical University with Umeå University, process industries and smaller companies in the cooperation. The research is targeted on the needs found by mapping the process industries.

The geographical proximity and similar industrial structure form the main base for the cooperation within the Bothnian Arc Association that has defined tourism, education, communication, industry and health and welfare as the main areas of joint development.

### Bothnian Arc of Knowledge Programme

In early 2002 the universities of Oulu and Lapland, Luleå technical university and the three universities of applied sciences (Oulu, Kemi-Tornio and Rovaniemi) published a joint programme called Bothnian Arc of Knowledge (2002). The programme includes defining focus areas for joint development (Figure 2). The focus areas are defined as crossing points of business areas and the application areas. The business areas are ICT, metal, forestry, wellness and experience industry. The application areas are spatial development, ICT, transport and logistics plus environment and sustainable development.



**Figure 2.** Focus areas in the Bothnian Arc of Knowledge Programme

As its third dimension the programme also defines an action plan; what type of joint actions were planned to be done. These actions were targeted in:

- education co-operation,
- virtual education and cooperation (the Virtual Bothnian Arc of Knowledge),
- making joint research applications in European Union framework programmes,

- developing Triple-Helix co-operation (Higher education – private – public),
- postgraduate school activities and
- founding a joint information office and a secretariat.

More detailed plans are described in the programme paper.

## **Development in Co-operation**

The goals of the co-operation have been set by defining the areas of co-operation and the actions to be taken. Measurable goals have not been defined. In the following the development has been described with some cases.

### **Inter-Company Co-operation**

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Cross-border co-operation between companies consists mainly of trade, ownership and founding branch offices in the other country. There are also cases where companies have made e.g. product development or other innovation related cooperation, but in these cases the partners are often from other parts of the countries (based on a few interviews done in the companies).

In Interreg III A North programme high expectations have been set on co-operation between companies in the area including Northern parts of Finland, Sweden and Norway. So far there haven't been many development projects run by private companies. ([www.interregnord.com](http://www.interregnord.com))

One of the few is Kemikalix project that was a product development project between two companies: Selmic Oy in Kemi and CareTech Ab in Kalix. CareTech Ab develops and sells security telephones, in-house systems, alarm transmitters, alarm receivers plus door and lift phones. Most of the products are targeted to home care of elderly people. Selmic Oy is a Kemi based company having offices and factories both in Kemi and Oulu. The main products of Selmic Oy are customer specific micro modules (LTCC and HTCC) and assembling of integrated circuits. In early 2004 CareTech Ab was renewing its wrist bearable alarm unit. It found Selmic Oy to be a potential supplier for electronics design and production. With help from public sector actors the companies applied financing from Interreg IIIA North and national financiers. The project was realized in the year 2005. A mechanics supplier from China and an industrial design company from Sweden were involved. The renewed product was launched in October 2006.

A typical feature in this case is that the companies did not know about each other before they were introduced by public actors. This opens up a role in networking for the higher education institutions and other public actors.

## University-Company Co-operation

University-company co-operation signifies here research co-operation. Two cases will be described.

BeJord (Behandling av förenade jordar, Treatment of Contaminated Soils) is a project between two Swedish companies (Ragn-Sels Ab, Normark Jord Ab), two Finnish companies (Kalottikone Oy, Savaterra Oy), Luleå technical university and Digipolis Research / University of Oulu technology research unit in Kemi. LTU's role is in developing methodology for treatment of mixed contaminated soils with both organic materials and heavy metals. In Kemi the goal is to develop analysing and measurement methods and methodology for field use. The work will be part of two doctoral dissertations. The companies will put the results in practice. (Maurice & al, 2006)

SensorBand is a multidiscipline research project dealing with methods and technologies to detect hazard situations from the body of elderly people in home care. The partners are the electrical engineering and health care departments of Luleå technical university, Digipolis Research /University of Oulu Kemi unit, institute of medical technology of university of Oulu plus one company from Kalix, Sweden and two companies from Kemi, Finland. Also in this project there are three doctoral candidates doing the research; one in Kalix, one in Kemi and one in Oulu. In the research the role of Oulu is to find reliable ways to identify falling and other non-wished situations, Kemi's role is to study the reliability questions and Kalix's role is to find effective ways for signal processing. (Saari & al 2006)

## University-University co-operation

The co-operation between universities and universities of applied sciences has been going on on some scale for a long time. In the year 2004 University of Oulu got a smallish financing from the Finnish Ministry of Education to activate and coordinate the work. Since then the number of joint activities and the volume has grown onto a new level. This concerns both company-university co-operation, university-university co-operation and innovation system level co-operation.

This chapter deals with two cases: Education and research co-operation in information security and joint postgraduate school project PhD-Polis.

The planning and development in information security education and research co-operation started with a visit from Oulu to Luleå in April 2004. It became obvious that the partners can benefit from each others' expertise. The network was then completed with the department of law of the university of Lapland and data processing department of Kemi-Tornio University of applied sciences. The first phase was a planning project in year 2005. The project consisted of market research, learning each others courses and expertise and planning of a major project that was started in early 2006 (Saari & al, 2005). The main project covers development of courses on the Internet using several

methods, first implementation of the courses in Master programmes at universities of Oulu and Luleå and professional specialisation studies at Kemi-Tornio University of applied sciences, start-up of joint research and planning of future cooperation. The project will end in December 2007 but the co-operation will be continued also after afterwards with goals also in joint Master programme and joint participation in EU's 7<sup>th</sup> framework programme.

The PhD-Polis project was an Interreg IIIA North partially financed project consisting of two post-graduate research projects:

- MICA focusing on problems in robotic solutions for the elderly and disabled ([mica.csee.ltu.se/mica\\_menu.html](http://mica.csee.ltu.se/mica_menu.html)) and
- p4 focusing on acoustic and optical measurements in pulp and paper industries.

The project partners in subproject MICA are Luleå technical university and the department of industrial design of University of Lapland, both having one PhD student working in the project. In P4 the partners were LTU and the university of Oulu both having also one PhD student in the project. The results will be published later in form of doctoral dissertation added with some papers already published.

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### **Innovation System Level Co-operation**

A look at Interreg IIIA North's web pages tells that intermediary organisations are very active in their efforts to develop the cooperation over the border. In fact this type of work started already in the 1990's in the European Union RIS programme continuing then with RIS+ and TRIP (e.g. Trip Northern EU 1999-2001 final report, 2002). The technology parks were the major actors in all these projects. The work has later been done mainly with partial financing of Interreg III A programme. In this chapter the focus is on activities of the technology parks and universities focusing on high technology with partial financing from Interreg A programmes.

Technology parks have continued the work with Kemin Digipolis Oy and Teknikby Aurorum Ab in Luleå as leading partners in projects NEO and NEO<sup>2</sup>. The focus has been in expanding the Northern Finnish Multipolis collaboration to Northern Sweden and also to Northern Norway. Other forms of work have been road-shows spreading information of companies to companies, arranging seminars and conferences and creating new cross-border inter-company and other development and research projects based on company needs. NEO focuses on several sectors: ICT, e-health, process industry maintenance, electronic and digital media. ([www.neonorth.org](http://www.neonorth.org))

NEO's focus is in several technology and business sectors and focuses both on innovation and trade. Some of the other innovation system networking and bridging projects run by universities and research institutes focus on research and development co-operation in company- university groups.

NET (Kartläggning och utveckling av det norra miljöklustern, Mapping and Development of the Northern Environmental Cluster) project was run by Digipolis Research / University of Oulu in Kemi and LTU in the years 2004 and 2006. The projects main goal was to map the cluster in Northern parts of Finland and Sweden, find the needs for research, education and training and plan future so-operation (Legerkvist & al, 2005, [www.bothnian.net](http://www.bothnian.net)). The BeJord project described earlier is also a result of the project.

Luleå Technical University has for some years been leading ProcessIT Innovations network. The goal is new and better applications with high technology and knowledge intensity to process and manufacturing industries. The network covers Umeå University, most of the process industries in Northern Sweden and ICT companies. In the model the basic idea is that SMEs and other product and service companies make use of the basic and applied research results in new products and services. The traditional way to co-operate between research and industry has been to solve the problems between them. In ProcessIT model the goal is that research organisations do the research based on mapped needs from industries, but companies develop products or services. Goal is new sale from the region. Another advantage compared to research-industry co-operation is that the industries will also in the future have a supplier developing the equipment further and maintaining it. ([www.processitinnovations.se](http://www.processitinnovations.se))

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This promising model that already has some results is now being expanded to Northern Finland with the help of ProFi project (Nätverking ProcessIT Innovations och MNT Northern Finland, Networking ProcessIT Innovations and MNT Northern Finland) (Saari & al 2005). University of Oulu, VTT Oulu unit and Digipolis Research (including Kemi-Tornio University of applied sciences and University of Oulu technology research unit) are involved. Steering group consists additionally of representatives of process industries, maintenance companies and SMEs. Also TEKES and VINNOVA have their representatives present at the meetings. The goals are to launch the network in Northern Finland, map needs and possibilities, arrange workshops around specified topics, prepare joint research and development project and prepare for joint participation in EU's framework programmes.

### **Innovation Research Co-operation**

The previous chapters have concerned activities that can be seen as processes in a cross-border innovation system. The latest addition is co-operation in innovation research. In March 2006 the Institute of Industrial Economics of the University of Oulu and Institute of Industrial Economy of the Technical University of Luleå arranged the first joint seminar for their post-graduate research students. As continuation a conference on innovation research will be arranged in Oulu in December 2006.

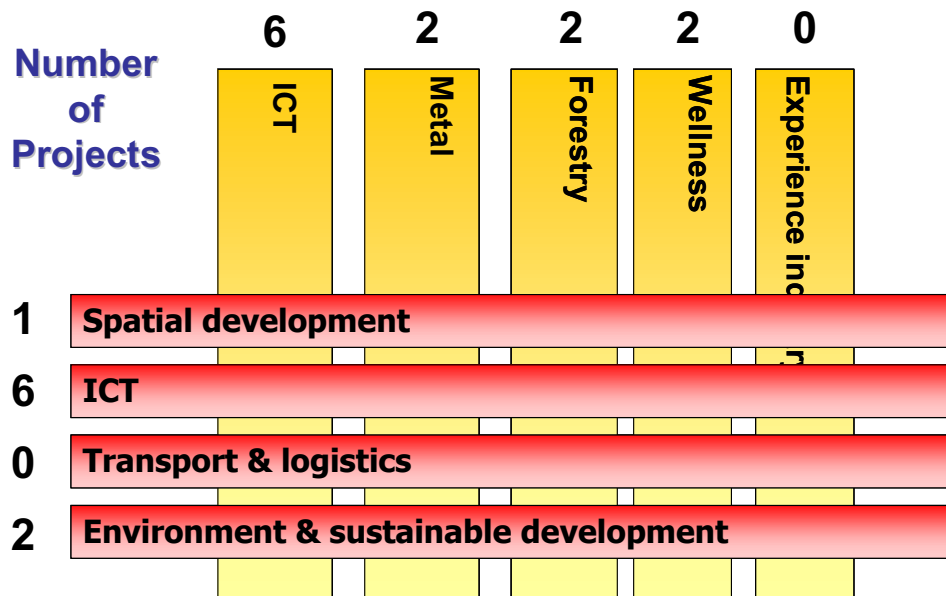


The conference is arranged with financial help from InnoCentra project having three goals (Project plan, 2006):

- research on the technology parks in the Bothnian Arc region,
- joint seminars and conferences to develop co-operation in research and
- joint networking in other parts of EU for participation in EU's 7<sup>th</sup> framework programme.

Two postgraduate students are doing the research. One research question deals with “the inter-organisational exchange relations and innovation in science parks” and the other with “knowledge management in SMEs in smaller technology parks”. Both studies have been started recently and the first results will be published in the joint conference in December.

### Conclusions



**Figure 3.** Activities vs. Focus Areas in the Bothnian Arc of Knowledge Programme.

In figure 3 the activities done so far have been compared to the Bothnian Arc of Knowledge programme. The figure shows that most of the focus areas have been covered. The weight point has been in ICT and applying it in other branches. In transport and logistics as well as experience industry there has not been any activities at least on project level.

	PhD Poliss	InforSec	Environment	ProcessIT	Wellness tech	InnoCentra	INOX Boreus
Education co-operation		X					
Virtual Knowledge Arc		X					
Research applications, EU FW		X		X		X	
Networking; univ-private-public	X	X	X	X	X	X	X
Cluster-based activities	X	X	X	X	X	X	X
Postgraduate school, research	X		X		X	X	
Information office							

**Figure 4.** Activities vs. Action Plan in the Bothnian Arc of Knowledge Programme

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Review of the results against the action plan in the Bothnian Arc of Knowledge programme shows that the projects studied cover well the goals set in university-private-public networking and that they are based on existing, chosen clusters. Research and postgraduate school are also well covered, while education co-operation and virtual education co-operation projects are rare. The idea of an information office has not been realised because there has not been any specific financing for the programme as planned in the original programme.

The future based on existing activities is the following:

- First doctoral theses to be published (2006)
- 7 PhD students (2006...)
- Joint research school in innovation research (February 06...)
- Joint courses in information security (October 2006...)
- Companies publish new joint products (October 2006...)
- At least three framework projects will be prepared before end of the year 2007
- TEKES will probably be involved in national financing in the next period giving new possibilities for applied research

So far the Interreg IIIA North programme has helped to start the co-operation. In the future the programme area will be expanded to Northern Ostrobothnia. This gives new possibilities. Also in the future Kemi-Tornio region's centrally located actors are expected to have a central role in developing the co-operation.

## References

- Bothnian Arc Association. Map of the Bothnian Arc Region. 2004
- Bothnian Arc of Knowledge Programme. 2002
- Frederiksen, I., Multipolis Network in the Oulu Centre of Expertise Programme 2003-2004. Final Report. Oulu 2005.
- Högström, A., Saari, S & Jämsä T., SensorBand: Mätningar och ICT för hemvårds distance monitoring. Project plan. 2006
- InnoCentra: Forskning av innovationsmiljöer som stöd för vidareutveckling av teknologisentra. University of Oulu, Luleå Technical University, Kemi-Tornio University of applied sciences. 2006
- Lagerkvist, A., Lidelöw, S., Rönkkö, R. & Saari, S., Mapping and Development of the Environmental Cluster in Northern Finland and Sweden. Final report. 2005.
- Maurice, C., Rönkkö R & Saari S., BeJord: Behandling av föroreande jordar, projektplan. 2006
- 61 [mica.csee.ltu.se/mica\\_menu.html](http://mica.csee.ltu.se/mica_menu.html), MICA project home page
- Saari, S., Majala, S., Furberg, L., Sjödin, M., Pankkonen, K. & Meriläinen, J., Development of Competence in Information Security with Higher Education Collaboration in the Bothnian Arc Region (Phase 1: Pre Study and Detailed Planning), University of Oulu, Meri-Lappi Institute, Kemi, 2005.
- Saari, S., Wikman, L. & Johansson, A.O.E., Nätverking av ProcessIT Innovations och MNT Northern Finland, Project plan, 2005
- Trip Northern EU 1999 – 2001, Final report, 2002.
- [www.bothnian.net](http://www.bothnian.net), Home page of environmental co-operation.
- [www.interregnord.com](http://www.interregnord.com), beviljade project
- [www.neonorth.org](http://www.neonorth.org), NEO (Northern Enterprise Operations), home page
- [www.processitinnovations.se](http://www.processitinnovations.se), Home page of ProcessIT Innovations network

Johanna Still

**The influence of R&D network conditions  
on its knowledge creation  
– case new mobile service development network**

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**Abstract**

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In today's industries the importance of organizational knowledge and its continuous creation is widely recognized. The idea of knowledge being a resource for companies is not an emergent insight as such, but it is only nowadays that information and knowledge have said to become the main producers of wealth. (Hislop 2003; Seidler-de Alwis et al. 2003). Hence, the competitive advantage of organizations is argued to be knowledge and innovations that base on continuous knowledge creation activities, both within organizations (e.g. Nonaka and Takeuchi 1995), and in research and development networks ranging from private to public sectors (Dyer and Nobeoka 2000; Möller and Halinen 1999; Powell et al. 1996; Gemünden and Heyderbreck 1995). That is why more emphasis should be based on studying how networks innovate, i.e. how they create new knowledge. What is even more crucial, however, is to understand how the special conditions associated with networks influence this knowledge creation, by making it either easier or more difficult.

This paper presents an upcoming research project, which concentrates on studying the above mentioned question in the field of new mobile service development. Research conducted in the field of R&D networks has mainly centered on studying the creation of products (Syson and Perks 2004, Johnes and Storey 1998). It is, however, argued that more emphasis should be based on studying also new service development processes, as service industries are becoming more and more important, and constant evolution of technologies creates completely new opportunities for service concepts (ibid.). One of these new opportunities is the field of mobile services (Drennan and Mort Sullivan 2003), i.e. services offered to consumers' mobile handhelds. New mobile services are argued to be of

crucial importance for e.g. the telecommunications sector (Blazevic et al. 2003). Currently, however, the development of new mobile services still faces big challenges in the technology of devices and mobile networks, and service ideas (Siau et al. 2001). Consequently, it is argued that mobile services require completely new ways of operating in organizations (Blazevic et al. 2003), e.g. by creating new mobile services in alliances or networks (Fouskas et al. 2005).

**Keywords:** inter-organizational collaboration, R&D networks, knowledge creation, communities of practice, new mobile service development

### **Introduction to the subject**

There are number of interrelated reasons that have brought organizational knowledge into the center of attention in many industries. One of the main reasons is the growth of information and communication technology (ICT) and service industries (Tuomi 1999, 77-86), where the intangible content of the output is much more relevant than the tangible, physical characteristics of it (Kenney 2001). This, together with the globalization of markets and toughening competition, has resulted in increased pressure to continuous innovations and development in both offerings and organizations (processes, structures, etc.) (Håkansson and Johanson 2001; Bertels and Savage 1998). Moreover, many markets are unstable, because of the constant evolution of technologies (Augier and Vendelo 1999). Succeeding today therefore requires aside from what we call tangible resources (machinery etc.), also knowledge of various kinds (Håkansson and Johanson 2001; Grover and Davenport 2001).

The above-described growing complexity in the creation of new offerings has also influenced organizations' research and development (R&D) activities. Globalized markets, as well as the development and complexity of new technologies, require a set of new market investments, knowledge and other resources that no organization can acquire individually (Dyer and Nobeoka 2000; Augier and Vendelo 1999; Möller and Halinen 1999, Powell et al. 1996). Therefore, in creating new offerings organizations have been operating more and more in R&D networks consisting of multiple actors, ranging from private to public sectors (Dyer and Nobeoka 2000; Powell et al. 1996), and sharing either similar interests, product or service fields, and/or competence profiles (Gulati et al. 2000; Möller and Halinen 1999; Gemünden and Heyderbreck 1995). Networks are seen as a way to access information, resources, markets, and technologies possessed by other organizations (Biemans 1992; Gemünden and Heyderbreck 1995; Gulati et al. 2000), as well as a way to reduce risks involved in the development of innovations (Gemünden et al. 1996). In short, regardless of the reason for networking, it can be argued that today innovations are based on knowledge that is distributed not within, but across organizations (Dyer and Nobeoka 2000; Gulati et al. 2000; Swan et al. 1999; Gemünden et al. 1996; Powell et al. 1996).

In this work it is argued that it is important to understand in what kinds of conditions R&D networks create new knowledge, i.e. innovate and develop new offerings. Consequently, the upcoming

research aims to describe and analyze these conditions in order to enhance the understanding of the operating of R&D networks. R&D networks are studied from the viewpoint of industrial network theory developed e.g. by the IMP-group (see etc. Håkansson and Snehota 1995; Håkansson and Johanson 1992). Research conducted by the IMP-group has indicated that networks consist of multiple, heterogeneous actors, which carry out various actions on different types of resources they possess (Håkansson and Snehota 1995; Håkansson and Johanson 1992). Notably, the knowledge the actors of the network possess is regarded as a resource (Håkansson and Snehota 1995). As the actors are heterogeneous, mutual learning is required for successful collaboration, especially in the case of creating novel offerings (Möller and Svahn 2002), i.e. in R&D networks. In other words, new knowledge creation is influenced by the ways in which R&D network actors are able to collaborate and conjoin their resources (Håkansson and Johanson 2001).

R&D network conditions for knowledge creation are then studied from the viewpoint of knowledge management theory concentrating on knowledge creating communities of practice (see e.g. O'Donnell et al. 2003; Wenger 1998; Seely Brown and Duguid 1998; Lave and Wenger 1991). This theoretical choice was made, because network theories have shown that the prevailing condition of networks is their heterogeneity, hence the interaction and collaboration of various types of actors. Research conducted on communities of practice concentrates then on studying how different types of communities collaborate (i.e. create knowledge) and what types of conditions either facilitate or inhibit their collaboration. Communities of practice are defined as “groups formed around a shared interest in which discussions builds on the values and motivations of their members” (O'Donnell et al. 2003, 81). They have different types of expertise areas, operating cultures and ways to communicate, and these differences influence heavily their collaboration (see e.g. Möller and Svahn 2002; Wenger 1998). As also the actors of R&D networks are heterogeneous, it can then be argued that they are facing same types of challenges in their knowledge creating activities as diverse ‘communities of practice’ (Möller and Svahn 2002). Therefore, utilizing the viewpoints of community of practice studies can be argued to enhance also the understanding of the collaboration between R&D network actors (Möller and Svahn 2002).

### **Justification of the study**

Johnson and Johnston (2004) argue that while much research has been conducted on knowledge creation process within organizations, more emphasis should be given to studying knowledge creation processes between organizations. This is because innovations base more and more on collaboration between different types of organizations (ibid). Furthermore, this research adapts the statement of Porac et al. (2004) who argue that as firms, universities, and governments spend considerable amounts of money into interdisciplinary research aiming to create new innovations, it is of crucial importance



to study in more detail how these types of heterogeneous constellations operate in practice. In a similar vein, Kavanagh and Kelly (2002) argue that despite there has been a growing interest in studying networks from a more knowledge-intensive viewpoint, more emphasis should still be placed on the conditions that influence their everyday operations. In other words, it is needed to study in more detail what are the conditions, which influence the everyday knowledge creating operations of inter-organizational networks.

In recent years there has been a growing interest in network theory literature to study networks from the points of view of knowledge creation (Möller and Svahn 2002) or organizational learning (see e.g. Håkansson and Johanson 2001; Håkansson et al. 1999). However, little research has thus far been conducted on the influence of R&D network context, i.e. the conditions of R&D networks, to inter-organizational knowledge creation (Johnson and Johnston 2004). However, as R&D networks are a complex, heterogeneous operating environment for organizations, it is argued in this work that a thorough understanding of the conditions in which they create knowledge is needed.

In order to find and describe the conditions influencing knowledge creation in R&D networks, this research aims to combine both knowledge management and network theory viewpoints on inter-organizational knowledge creation. This is because both theoretical viewpoints investigate the same phenomenon - collaboration between organizations - but from different points of view. It is argued in this work that the combination of these theoretical viewpoints brings extra value to the understanding of knowledge creating networks, by giving a more thorough picture of the conditions in which knowledge creating operations take place. Notably, one important notion about communities of practice is that it is argued that the current literature tends to use the concept too broadly, i.e. tends to forget the special characteristics of communities of practice (O'Donnell et al. 2003). Therefore, it is in the goals of this research to investigate how this concept can be utilized in network studies, without blurring or misusing its definition.

The empirical part of this research concentrates on R&D networks whose knowledge creation is concretized in new mobile services the networks develop. This empirical viewpoint was chosen, as it is argued that research conducted at the field of R&D networks has mainly centered on studying the creation of products, i.e. new product development (NPD) (Syson and Perks 2004, Johnne and Storey 1998, Storey and Easingwood 1998). It is, however, argued that more emphasis should be based on studying also new service development processes as service industries are becoming more and more important, and constant evolution of technologies creates completely new opportunities for service concepts (ibid.). Syson and Perks (2004) argue also that network-view to new service development is needed, and this is the viewpoint this work takes.

## Research questions

The previous chapters have argued that the competitive advantage of organizations is innovations, more precisely innovativeness through continuous knowledge creation. It was also stated that innovations are created in R&D networks between different types of organizations. An important question is then what are the conditions in such networks that influence the creation of innovations, i.e. new knowledge. Hence, the goal of the upcoming research project is to find and describe these conditions. Consequently, the research aims to answer to the question *how do the conditions of R&D networks influence its knowledge creation?*

This question is approached from two theoretical backgrounds: network theory, and knowledge management approach centering on knowledge creating communities of practice. Firstly, basing on the IMP network theory, R&D networks are in this work defined as constellations of actors aiming to create new knowledge in the form of new concepts, products, services, or processes. The R&D network is operational when its actors **interact** e.g. in the form of collaboration. (cf. Håkansson and Johansson 1992). In this research organizations or groups representing an organization are regarded as network actors. Secondly, as it was argued that R&D networks consist of heterogeneous actors, the viewpoints of knowledge management theory concentrating on communities of practice are utilized in studying the conditions influencing their knowledge creation. This theoretical choice was made, as studies conducted on communities of practice deal especially with the conditions, in which distinct communities interact. In other words, this research aims to enhance the understanding of R&D network conditions and their influence on knowledge creation by introducing the viewpoints of community of practice studies to network theories.

In order to understand the conditions influencing knowledge creation, it must firstly be known what knowledge in R&D networks is, and how is it created. Firstly, in this research project knowledge will be regarded as having both inarticulate (tacit) and articulated (explicit) characters, as well as both individual and social elements. In addition, it will be argued that knowledge in R&D networks is realized through their offerings, i.e. in what a R&D network produces (e.g. product, service, technology, process etc.). Secondly, with regard to knowledge creation this research project will adapt a standpoint that knowledge is created through collaboration (see e.g. Nonaka and Takeuchi 1995). In other words, knowledge creation is regarded to take place with the collaborative actions between R&D network actors. Thirdly, the conditions of R&D networks will be described from the viewpoint of network theory developed by the IMP group. A specific emphasis will be placed to describing the conditions from the viewpoint of collaboration in R&D networks, as collaboration is seen as the “space” for knowledge creation.

The subject of this research can be clarified as follows. There are multiple domains where knowledge is created: at the level of an individual, at the level of a group or team an individual belongs to within an organization, and at the level of a larger network of organizations. Conditions

influencing the knowledge creation vary between these layers – some might stay the same at all levels whereas some are more specifically conditions of a certain layer. In this study, the conditions for knowledge creation are studied at the level of a *network consisting of several organizations*. Thus, the scope of this research is mostly at the network level, not e.g. at the individual level (where individual cognitive skills, demographic characteristics etc. would be of greater emphasis). Furthermore, as it will be later on defined, knowledge creation takes place in interactions, and therefore this research centers on studying conditions that influence activities (i.e. interactions) in R&D networks.

Notably, this research project bases on a previous research that was conducted on conditions influencing knowledge creation between different departments of a university. The results of the previous research are introduced later on in this paper and will be used as a starting point to the upcoming research project.

### **Knowledge in organizations**

It must firstly be emphasized that no comprehensive definition of knowledge can be given, but some essential insights will be offered here on how knowledge is comprehended in this research. The viewpoint to knowledge this work adapts stresses that knowledge is essentially related to human action (e.g. Nonaka and Takeuchi 1995, Seely Brown and Duguid 1998, Wenger 1998, Kulkki 1999), i.e. knowledge is a capability to act (consciously or not) (Sveiby 2001). In addition, knowledge is defined to be context-specific and relational (Nonaka and Takeuchi 1995).

Knowledge is also separated from information and data. Data can be defined as discrete, unstructured symbols (Sveiby 2001), and it is needed to create information (Grover and Davenport 2001), which is a medium for explicit communication (Sveiby 2001). The relation between knowledge and information is that “people who are knowledgeable not only have information, but have the ability to integrate and frame the information within the context of their experience, expertise and judgment” (Grover and Davenport 2001, 6). It is also emphasized that knowledge is non-consumable; the more it is used the more there is of it (Augier & Vendelo 1999). Finally, since knowledge, unlike information, is endogenous, it is possessed within individuals, and therefore cannot be copied (Magalhaes 1998).

Moving on, it is argued that knowledge has both tacit and explicit (Polanyi 1964), as also individual and social (von Krogh et al. 2001) elements. Firstly, tacit knowledge is very personal and difficult to formalize and therefore hard to be shared or communicated (Leonard and Sensiper 1998). Explicit knowledge refers then to knowledge, which is codified and can be expressed by using formal, systematic language (Polanyi 1964, Nonaka and Takeuchi 1995). Secondly, individual knowledge deals with individual observations and actions in the world. Social knowledge in turn is shared among individuals, and can be for example common rules and forms of practice, as well as traditions (von Krogh et al. 2001).

## Organizational knowledge creation process

It is argued that knowledge creation is “as a by-product of interaction and transaction, between individual mind(s) and groups of minds within the context of the corporation” (Kulkki 1999, 42). Also e.g. Nonaka et al. (2001) emphasize that knowledge is created in social interactions, i.e. between people. Nonaka and Takeuchi (1995, 61-73) argue that new knowledge is created through knowledge conversion, an interaction process between tacit and explicit as well as individual and social knowledge. Knowledge conversion takes place when knowledge is socialized (shared), conceptualized, combined, and internalized both between individuals, groups, and organizations (see Figure 1). (Nonaka and Takeuchi 1995, 61-73). Consequently, it can be noted that knowledge creation takes place in *interaction, sharing and collaboration* - also between inter-organizational network of actors.



Figure 1: Spiral of knowledge (in Seufert et al. 1999).

To clarify, Nonaka and Takeuchi (1995, 83-89) debrief how innovations are created in organizations by knowledge creation process. Knowledge creation starts with sharing tacit knowledge between individuals. Following that, new product, service and system concepts are created based on the shared knowledge. These concepts must then be *justified* among organization members. Justification refers to the process of determining (in the level of whole organization), whether the newly created concepts are truly worthwhile and fit the organization’s goals and intentions. After that, on the basis of justified concepts, prototypes or initial service offerings can be built. Finally, the created knowledge (concepts, prototypes etc.) is cross-leveled throughout the company (or a network).

Kulkki (1999) furthers from Nonaka and Takeuchi (1995) and notes that new or revised *tacit* knowledge is created when individuals are exposed to new experiences (see also Seidler-de Alwis et al. 2003; Leonard and Sensiper 1998; Seely Brown and Duguid 1998). Actions both within and between organizations are then seen as a source for these experiences (Seidler-de Alwis et al. 2003;

Kulkki 1999). There are then two sources of action leading to new tacit knowledge: either spaces of discontinuity or problem solving activities (Kulkki 1999). First, spaces of discontinuity, also called as “mismatches”, are situations where old interpretations of meanings and actions associated in a specific event are transformed into new ones (see also Wenger 1998). Second, shared problem-solving activities lead to solutions that create mutual understanding and thus new shared tacit knowledge (see also Muukkonen et al. 2003; Seely Brown and Duguid 1998).

Overall, this research will emphasize that new knowledge in R&D networks is created through interactions. The conditions in which interactions take place are the key interest point of this work.

### R&D networks

As has been stated in previous chapters, knowledge is context-bound. Therefore it can be argued that the context for knowledge creation itself is a condition that has a remarkable influence on the knowledge creation process (Nonaka et al. 2001). The upcoming research project studies knowledge creation in the context of R&D networks.

The network perspective states that network relationships are developed to gain access to and utilize the resources and capabilities that other organizations possess (Håkansson and Snehota 1995). The Industrial Network Theory, developed e.g. by the IMP Group (ibid.), has introduced an actors-resources-activities (ARA)-model (e.g. Håkansson and Johansson 1992) to describe the basic elements of such networks (see Figure 2).

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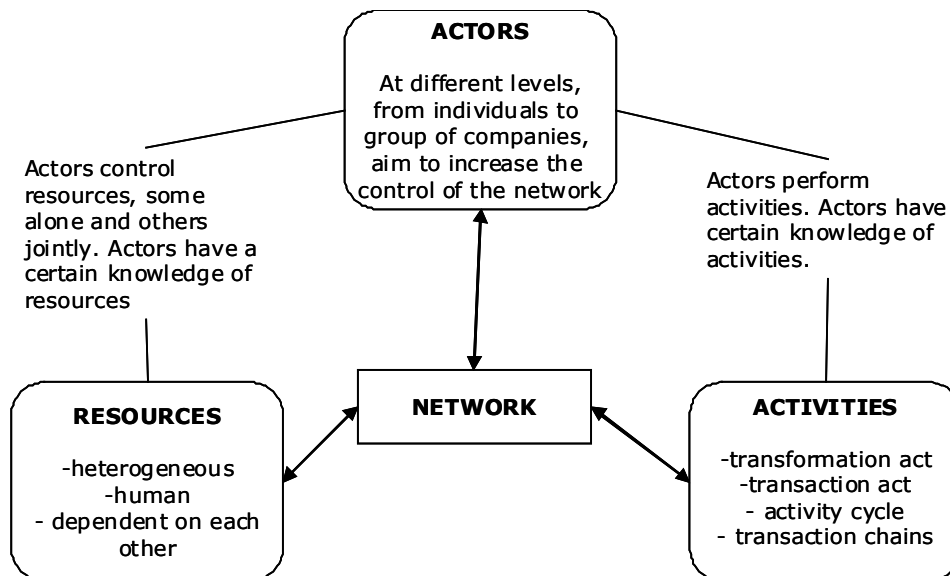


Figure 2: A network model (Axelsson 1995).

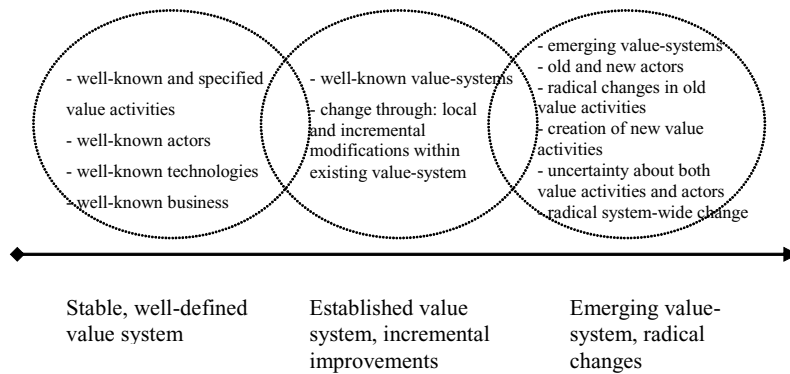
According to ARA-model, networks consist of multiple actors, carrying out multiple actions on multiple types of resources, possessed by the actors (Håkansson and Snehota 1995; Håkansson and Johansson 1992). In the network individuals, groups, organizations, or groups of organizations can operate as actors. Actors have collaboration relationships with other actors in the network (ibid.), though in the same time they aim to increase their control over the network (Axelsson 1995). The resources of actors are technical, financial, and intellectual assets the actor possesses (Håkansson and Snehota 1995; Håkansson and Johansson 1992). Notably, in the ARA-model the knowledge an actor has is seen as a resource (Håkansson and Snehota 1995). When actors then utilize their resources in network – combine, develop, exchange, and create them – activities are generated (Håkansson and Johansson 1992).

According to Möller and Svahn (2002) different types of networks vary e.g. in their goals (systemic efficiency vs. new offerings), dynamics (from stable to highly dynamic), and the type of knowledge available (explicit vs. tacit). Each network produces then value - i.e. offerings, systems, knowledge – through different types of joint activities. The activity system varies depending on how well the value activities of the network are known, the capabilities of the actors to carry out these activities, and how explicitly can these activities be specified, i.e. what are the conditions of the network for value creation. A value system continuum describing the heterogeneity can then be described as in Figure 3. (Ibid.).

Möller and Svahn (2002) explain the continuum as follows: The left end of the continuum describes a clearly specified and relatively stable value system, where the actors are known, as are their value activities and capabilities. In the middle of the continuum are then value systems that are comparatively well determined. They are however modified through incremental and local change processes. The right end of the continuum represents emerging value systems, which are developing new technologies, products or business concepts. These systems are future-oriented, requiring perhaps radical changes in both the existing value systems and in the creation of new value activities. These types of networks have both old and new actors. Möller and Svahn note that the continuum is only “an abstract and static theoretical construct” and many networks stretch across many “ideal” types. They however argue that established value system and/or emerging value system types of network best characterize networks aiming to create new knowledge.



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**Figure 3:** Value-system continuum (Möller and Svahn 2002).

From the viewpoint of this research, a notable character of networks is their complexity for example in the number of actors, their types, background, and connections (Håkansson and Snehota 1995). The actors of networks are also argued to be interdependent in their operations (Håkansson and Snehota 1995), which are connected in a way that past experiences and operations influence the way the operations are carried out in the future (Håkansson and Ford 2002). Consequently, knowledge creating activities in networks take place in a context, which is very complex and diverse. Same type of diversity is also dealt with in the theory of communities of practice, which will be introduced next.

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### Communities of practice

Communities of practice are defined to be groups of people who work together with a common understanding of purpose of the work, and a need to know what the others know (Seely Brown and Solomon Gray 1998 via Hildreth et al. 2000), with a primary purpose to create and disseminate collective knowledge (Kramer 1999). Notably, when studying communities of practice, extra caution is required in the definitions and analyses concerning them (O'Donnell et al. 2003), as it is argued that conventional communities in organizations, such as work groups, teams, or task forces, are not necessarily communities of practice. (Seely Brown and Duguid 1998). This is because it is argued that membership in a community of practice cannot be obtained “by command”, i.e. communities of practice cannot be created by at least traditional managerial order (see e.g. O'Donnell et al. 2003).

Membership in a community of practice is usually obtained through participation in the practices of the community. Hence, practice is in crucial role in communities of practice, as they create their worldview, i.e. their knowledge base, through it. The worldview incorporates a shared understanding of what the community does, how to do it, and how it relates to other communities. (Seely Brown and



Duguid 1998). Gaining shared understanding requires negotiation, which is an ongoing process in communities (Wenger 1998). According to Wenger (1998) an important characteristic of community of practice is also mutual engagement, by which he refers to the mutually agreed membership in a community of practice, deriving from mutual commitment. Wenger emphasizes also that communities of practice have a shared repertoire, i.e. communities of practice have “shared resources to negotiate meaning”. They are produced over time, and include e.g. routines, words, tools, ways of doing things, stories, gestures, symbols, actions, and concepts.

As each community of practice defines its own ways of doing things, different communities of practice, especially coming from multiple disciplines, have most likely very different ways to process knowledge. In addition, they may not have commonly shared ways to collaborate with each other. (Muukkonen et al. 2003; Möller and Svahn 2002). What binds these distinct communities of practice and their knowledge creation processes together is then the larger system they belong to and moreover the joint activities they are performing in the system.

Overall, it can then be noted that the theory of communities of practice takes a similar type of viewpoint to the heterogeneous and complex operating environment than the industrial network theory. It is of crucial importance to bear in mind, however, that communities of practice are not necessarily the same thing as traditional teams or task forces, which can be created through structural solutions. Hence, the viewpoints of ‘community of practice’ must be carefully investigated before applying them to R&D network viewpoints.

Hence, knowledge-creating networks have then certain types of conditions influencing their operations. More research in this work is needed to investigate the special conditions of R&D networks that influence their knowledge creation. The next chapter will, however, present some insights into this issue, from a previous research that studied a knowledge creating network at a university.

### **Conditions influencing knowledge creation in university research networks**

This chapter introduces shortly a previous research conducted on conditions influencing knowledge creation in a network of different departments of a university. The distinct departments were regarded as communities of practice, each having their own ways to acquire and process knowledge, communicate, and operate. The conditions that influenced the knowledge creation were studied through two viewpoints: organizational culture, and organization and management. The former describes operating cultures of the actors and their capabilities to understand each other, i.e. conditions that are more actor-specific. The latter deals then with network-specific structural and management practice issues. Similar types of categorizations for analyzing knowledge creation in organizations have been used previously by Hytönen and Kolehmainen (2003), Gold et al. (2001), and Armbrrecht et al. (2001).

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Tables 1 and 2 summarize the theoretical viewpoints of the study.

From the viewpoint of culture it was noted that knowledge in a network is created only if the members of it collaborate and share information and knowledge. Collaboration and sharing take place in network relationships, which require e.g. openness, mutual trust, willingness and commitment to share, and a network identity for each community of practice. The overall atmosphere of courage and a certain level of informality are seen as enablers for knowledge creation. The different cultures of communities of practice in a network create both barriers and opportunities to mutual sharing of knowledge. It was argued that as different communities of practice have different knowledge bases and working cultures, difficulties may exist when they try to collaborate. The different standpoints of communities of practice (‘requisite variety’) were however also seen as richness in the knowledge creation process, as they create new insights and viewpoints to the process.

**Table 1.** Summary of the conditions of organization culture at the early stage.

<b>ORGANIZATIONAL CULTURE</b>	
<ul style="list-style-type: none"> <li>- Two overlapping layers: culture of a community of practice and culture of a network</li> <li>- Direct the way how communities of practice and the whole network operates</li> </ul>	
<b>CONDITION</b>	<b>DESCRIPTION</b>
<b>Collaboration and sharing</b>	Knowledge creation process requires collaboration among communities of practice
	Sharing of information and knowledge is required for collaboration
	Sharing takes place in relationships within and between communities of practice
<b>Network atmosphere</b>	Influences the ways information and knowledge are shared
	Openness; knowledge and information flow freely among communities of practice
	Mutual trust; basis for collaboration
	Commitment; motivation to participate in collaboration
	Identity; the roles of the communities in collaboration
	Informality, courage, being broadminded
<b>Common stock of knowledge</b>	Collaboration requires some level of shared understanding and coherency between communities; reciprocally shared understanding is created by collaboration and communication
	Common stock of words; commonly understood language
<b>Requisite variety</b>	Multiple viewpoints enrich knowledge creation process
	Fluctuation and change in the operating environment create possibilities for new knowledge creation -> improvisation

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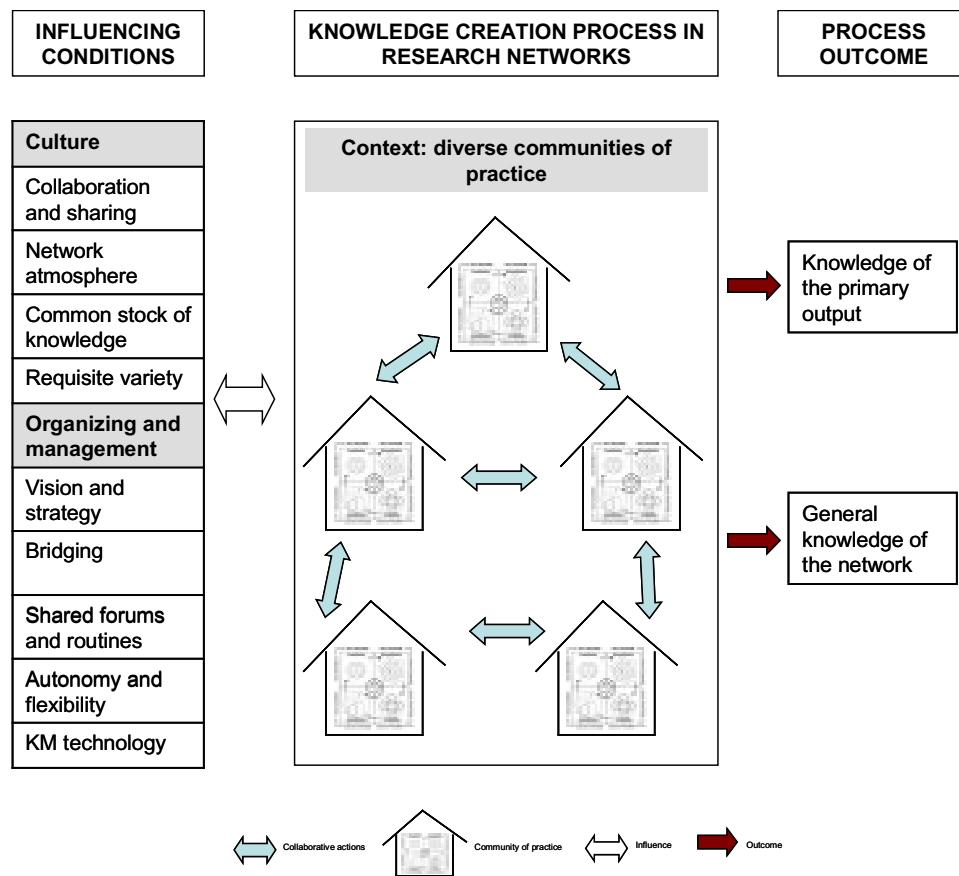
From the viewpoint of organizing and management, then, it was firstly stated that network-wide vision and strategy direct the ways to operate toward certain negotiated common goals. Secondly, it was noted that one of the most important ways to enhance collaboration in network is to build bridges between distinct communities of practice, by special boundary spanning persons, objects, and practices. In addition, shared forums and routines for distinct communities of practice were seen important, as well as certain shared routines. It was however emphasized that knowledge creation process calls also for autonomy for distinct communities of practice, as they each are the experts of their own field. It was also noted that flexibility is needed in knowledge creation process, as the environment for networks is constantly changing. Finally, knowledge management (KM) -technologies were seen as a way to share (mostly) explicit knowledge, hence being one factor in a construction of a shared knowledge base of distinct communities.

**Table 2.** Summary of the conditions of organizing and management at the early stage.

<b>ORGANIZING AND MANAGEMENT</b>	
<ul style="list-style-type: none"> <li>- Ways to facilitate the collaborative knowledge creation process in networks</li> <li>- Different types of structural solutions, strategies, etc.</li> </ul>	
<b>Vision and strategy</b>	Shared vision; reflects the culture of networks
	Shared goals; direction for the knowledge creation process
	Shared strategies; codes of practice for the network, boundaries for the knowledge creation process
<b>Bridging</b>	Building bridges between distinct communities of practice in order to create collaboration
	Bridging persons; organizational translators, knowledge brokers, boundary spanners
	Boundary objects; documents, technologies, processes etc., which connect distinct communities of practice
<b>Shared forums and routines</b>	Knowledge creation process requires shared forums where communities of practice collaborate
	Shared forums can be e.g. meetings, conversations, visits, and all types of shared practices between communities
	Effective knowledge creation processes require also shared routines
<b>Flexibility and autonomy</b>	Flexibility; changes in operating environment call for flexibility
	Autonomy; communities of practice are experts of their own fields, and autonomy to design their ways to work is seen important
<b>KM technology</b>	Many types of technologies developed, usage situation dependent Assists in sharing data and information

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The results of the previous research are then summarized in Figure 4.



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**Figure 4:** Framework of conditions influencing knowledge creation in research networks

The research indicated that different communities of practice have different ways to create knowledge, illustrated in the figure 4 as different knowledge conversion processes. The context of different types of communities of practice itself was also seen as an influential condition for knowledge creation, as it was noted that different types of communities had very different types of professional languages, ways to operate etc. Other conditions influencing the knowledge creation were the above described conditions of culture, and organizing and management. All these together have an effect on the knowledge that is being created in the network. It was noted in the research that the knowledge the network created was related to the offering the network was developing (“the primary output” of the knowledge creating process) but also to general understanding of the network and its actors. All these notions are argued to be interesting and important to study also in the current research of R&D networks. More information about the previous study can be found in Still (2004). Finally, when considering the usability of community of practice viewpoints in R&D network studies it can be argued on the basis of this study that they enhance the understanding of the conditions in which

different types of actors operate. They pinpoint the effects of diverse knowledge bases different actors have, and their influence on the collaborative activities in a network. **The concept of ‘community of practice’ is, however, challenging to management and network studies, as the basic assumption of the concept is that communities of practice are not created by managerial activities.** Therefore, it is suggested that more research need to be conducted on the ways the concept of ‘community of practice’ can be implemented into management and network studies.

## Research strategy

In consequence of the goal of this study, it will be conducted as a descriptive, qualitative case study that utilizes the logic of abductive research. In abductive research the theoretical framework of the study, data collecting and data analysis are developed in parallel. The empirical part of this research project will consist of two descriptive case studies, in which R&D networks aim to study and develop new mobile multimedia services. The first case deals with a R&D network that created and piloted a new mobile service for the supporters of a sports team. The mobile service based on existing technologies, products and services that were then combined in a novel way through collaboration of the network actors. The second case introduces a R&D network, which aims to develop new mobile multimedia services to students and personnel of universities and other educational institutes. Some of the services are wholly new, whereas others are novel combinations of existing services. The two cases are interconnected in that both mobile services have been partially created in a certain government-university-industry R&D network. However, the actors in both service development networks are partially different, and therefore they are both dealt with as separate cases.

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## References

- Armbrecht Jr, F.M.R., Chapas, R.B., Chappelow, C.C., Farris, G.F. (2001). Knowledge management in research and development. *Research Technology Management* Jul/Aug 2001.
- Augier, M. & Vendelo, M.T. (1999). Networks, cognition and management of tacit knowledge. *Journal of Knowledge Management* Vol. 3, No. 4, pp. 252-261.
- Axelsson, B. (1995). The development of network research – a question of mobilization and perseverance. In Möller, K. & Wilson, D. (eds.). *Business Marketing: an Interaction and Network Perspective*. Kluwer Academic Publishers.
- Bertels, T. & Savage, C. (1998). Understanding knowledge in organizations. In Von Krogh, Roos & Kleine (eds.). *Knowing in Firms*. Sage.
- Blazevic, V., Lievens, A. & Klein, K. (2003). Antecedents of project learning and time-to-market during new mobile service development. *International Journal of Service Industry Management* Vol. 14, pp. 120-147.
- Clarke, I.I. (2001). Emerging value propositions for m-commerce, *Journal of Business Strategies* Vol. 18, pp. 133-148.
- 77 Drennan, J. & Mort Sullivan, G. (2003). Examination of the influence of personal attributes on consumer use of m-services. A paper presented at ANZMAC Australian and New Zealand Marketing Academy, Adelaide, 2003.
- Dyer, J. & Nobeoka, K. (2000). Creating and managing a high-performance knowledge-sharing network: the Toyota case. *Strategic Management Journal* Vol. 21, pp. 345-367.
- Eisenhardt, K. (1989). Building theories from case study research. *Academy of Management Review* Vol. 14, pp. 532-550.
- Gemünden, H, Ritter, T & Heydebreck, P. (1996). Network configuration and innovation success: an empirical analysis in German high-tech industries. *International Journal of Research in Marketing* Vol. 13, Iss. 5, pp. 449-462.
- Gemünden, H. & Heydebreck P. (1995). The influence of business strategies on technological network activities. *Research Policy* Vol. 24, pp. 831-849.
- Gold, A.H., Malhorta, A. & Segars, A.H. (2001). Knowledge management: an organizational capabilities perspective. *Journal of Management Information Systems* Vol. 18, Iss. 1, pp. 185-214.
- Grover, V. & Davenport, T.H. (2001). General perspectives on knowledge management: fostering a research agenda. *Journal of Management Information Systems* Vol. 18, Iss. 1, pp. 5-21.
- Gulati, R, Nohria, N & Zaheer, A. (2000). Strategic networks. *Strategic Management Journal* Vol. 21., 3. special issue on strategic networks, pp. 203-215.

- Håkansson, H. & Johanson, J. (1992). A model of industrial networks. In Axelsson, B. & Easton, G. (eds.). *Industrial Networks: a new view on reality*. Routledge.
- Håkansson, H. & Snehota, I. (1995). *Developing Relationships in Business Networks*. Routledge.
- Håkansson, H., Havila, V. & Pedersen, A-C. (1999). Learning in networks. *Industrial Marketing Management* Vol. 28, pp. 443-452.
- Håkansson, H. & Johanson, J. (2001). Business network learning - basic considerations. In Håkansson, H. & Johanson, J. (eds.). *Business Network Learning*. Pergamon.
- Hislop, D. (2003). Knowledge integration processes and the appropriation of innovations. *European Journal of Innovation Management*, Vol. 6, No. 3, pp. 159-172.
- Hytönen, S. & Kolehmainen, J. (2003). Tietämyksenhallinta uusmedia- ja ohjelmistoyritysten innovaatiotoiminnassa. Työraportteja 68/2003, Tampereen yliopisto, Työelämän tutkimuskeskus.
- Johne, A. & Storey, C. (1998). New service development: a review of the literature and annotated bibliography. *European Journal of Marketing* Vol. 32, Iss. 3/4.
- 78 Johnson, W.H.A. & Johnston, D.A. (2004). Organisational knowledge creating processes and the performance of university-industry collaborative R&D projects. *International Journal of Technology Management* Vol. 27, No. 1, pp. 93-114.
- Kavanagh, D. & Kelly, S. (2002). Sensemaking, safety, and situated communities in (con)temporary networks. *Journal of Business Research* Vol. 55, pp. 583-594.
- Kenney, M. (2001). The temporal dynamics of knowledge creation in the information society. In Nonaka & Nishiguchi (eds.) *Knowledge Emergence*. Oxford University Press.
- Kramer, R.M. (1999). Social uncertainty and collective paranoia in knowledge communities: thinking and acting in the shadow of doubt. In Thomposn, L.L., Levine, J.M. & Messick, D.M. (eds.). *Shared Cognition in Organizations: the Management of Knowledge*. Lawrence Erlbaum.
- Kulkki, S. (1999). Knowledge Creation of Multinational Corporations: knowledge creation through action. *Acta Universitatis Oeconomicae Helsingiensis A-115*. HeSe print.
- Lave, J. & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation* (reprinted 1995). Cambridge University Press 1995.
- Leonard, D. & Sensiper, S. (1998). The role of tacit knowledge in group innovation. *California Management Review*, Spring 1998.
- Li, F. & Whalley, J. (2002). Deconstruction of the telecommunications industry: from value chains to value networks. *Telecommunications Policy* Vol. 26, pp. 451-472.



- Magalhaes, R. (1998). Organizational knowledge and learning. In Von Krogh, Roos & Kleine (eds.). *Knowing in Firms*. Sage.
- Menor, L.J., Tatikonda, M.V. & Sampson, S.E. (2002). New service development: areas for exploitation and exploration. *Journal of Operations Management* Vol. 20, pp. 135-157.
- Miles, R.E., Snow, C.C., Mathews, J.A., Miles, G. & Coleman Jr, H.J. (1997). Organizing in the knowledge age: anticipating the cellular form. *The Academy of Management Executive* Vol. 11, Iss. 4, pp. 7-20.
- Möller, K. & Halinen, A. (1999). Business relationships and networks: managerial challenge of network era. *Industrial Marketing Management* Vol. 28, pp. 413-427.
- Möller, K. & Svahn, S. (2002). Role of knowledge in the value creation in business nets. A competitive paper submitted to the IMP 2002 conference in Dijon, France.
- Muukkonen, H., Lallimo, J., Lipponen, L. & Hakkarainen, K. (2003). Artifacts and talk: developing understanding of who knows what in a multi-professional team. A paper presented at the 10<sup>th</sup> Biennial EARLI Conference in Padova, Italy.
- Nonaka, I. & Konno, N. (1998). The concept of “ba”: building a foundation for knowledge creation. *California Management Review* Vol. 40, Iss. 3, pp. 40-54.
- Nonaka, I. & Takeuchi, H. (1995). *The Knowledge-Creating Company*. Oxford University Press.
- Nonaka, I., Konno, N. & Toyama, R. (2001). Emergence of “ba”: a conceptual framework for the continuous and self-transcending process of knowledge creation. In Nonaka & Nishiguchi (eds.). *Knowledge Emergence*. Oxford University Press.
- O’Donnell, D., Porter, G., McGuire, D., Garavan, T.N., Heffernan, M. & Cleary, P. (2003). Creating intellectual capital: a Habermasian community of practice (CoP) introduction. *Journal of European Industrial Training* Vol. 27, Iss. 2/3/4, pp. 80-87.
- Polanyi, M. (1964). The logic of tacit inference. In Grene, M. (ed.). *Knowing and Being: Essays by Michel Polanyi*. Publisher 1969.
- Porac, J.F., Wade, J.B., Fischer, H.M., Brown, J., Kanfer, A. & Bowker, G. (2004). Human capital heterogeneity, collaborative relationships, and publication patterns in a multidisciplinary scientific alliance: a comparative case study of two scientific teams. *Research Policy* Vol. 33, pp. 661-678.
- Powell, W.W., Koput, K.W. & Smith-Doerr, L. (1996). Interorganizational collaboration and the locus of innovation: networks of learning in biotechnology. *Administrative Science Quarterly* Vol. 41, Iss.1.
- Seely Brown, J. & Duguid, P. (1998). Organizing knowledge. *California Management Review* Vol. 40, No. 3.

- Seidler-de Alwis, R., Hartmann, E. & Gemünden, H.G. (2003). The role of tacit knowledge in innovation management. Competitive paper submitted to the 19<sup>th</sup> Annual IMP Conference at the University of Lugano.
- Siau, K., Lim, E-P., & Zixing, C. (2001). Mobile commerce: promises, challenges and research agenda. *Journal of Database Management* Vol. 12, pp. 4-13.
- Still, J. (2004). Conditions influencing knowledge creation in research networks at their early stages. Master Thesis. University of Oulu.
- Storey, C. & Easingwood, C.J. (1998). The augmented service offering: a conceptualization and study of its impact on new service success. *Journal of Product Innovation Management* Vol. 15, pp.335-351.
- Sveiby, K-E. (2001). A knowledge-based theory of the firm to guide in strategy formulation. *Journal of Intellectual Capital*, Bradford 2001.
- Swan, J., Newell, S., Scarbrough, H., Hislop, D. (1999). Knowledge management and innovation: networks and networking. *Journal of Knowledge Management* Vol. 3, No. 4, pp. 262-275.
- Syson, F. & Perks, H. (2004). New service development: a new perspective. *Journal of services marketing* Vol 18, Iss. 4, pp. 255-266.
- Tuomi, I. (1999). *Corporate Knowledge: Theory and Practice of Intelligent Organizations*. Metaxis 1999.
- Von Krogh, G. (1998). Care in knowledge creation. *California Management Review*, Vol. 40, Iss.3, pp. 133-153.
- Von Krogh, G., Ichijo, K. & Nonaka, I. (2001). Bringing care into knowledge development of business organizations. In Nonaka & Nishiguchi (eds.) *Knowledge Emergence*. Oxford University Press 2001.
- Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity* (reprinted 2001). Cambridge University Press 2001.
- Yin, R. (1995). *Case Study Research: Design and Methods*. Sage.

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## **Socially Innovative Networks: Deserve Case**

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### **Abstract**

What is the role of social networks in the implementation of the innovative solutions? What do networks need to become innovative? Do technological innovation and social innovation hinder or stimulate each other? Our paper proposes some potential replies to these questions. Social innovation, social networks, social capital, and technical innovation, as well as knowledge transfer and management are briefly considered in the theoretical part of the paper. Improving citizen empowerment, the use of participatory politics, also stimulates the potential occurrence of the innovations. Consequently, open society with full civil rights also encourages the innovations' appearance. Citizens, particularly the interactions between citizens, are new innovation generators. We see innovations as social constructions (social constructive paradigm of innovations). From this perspective, every innovation, even the most technical one, is a social innovation. The proposed concepts are further applied in the particular case of Deserve project, mainly funded by the Northern Periphery Programme. Deserve stands for Delivering Services in Rural and Remote Area, which assumes that service provision can be done by learning from each others' experience. Implementing IT can, as well, be a technically innovative solution taken into consideration while designing service provision.

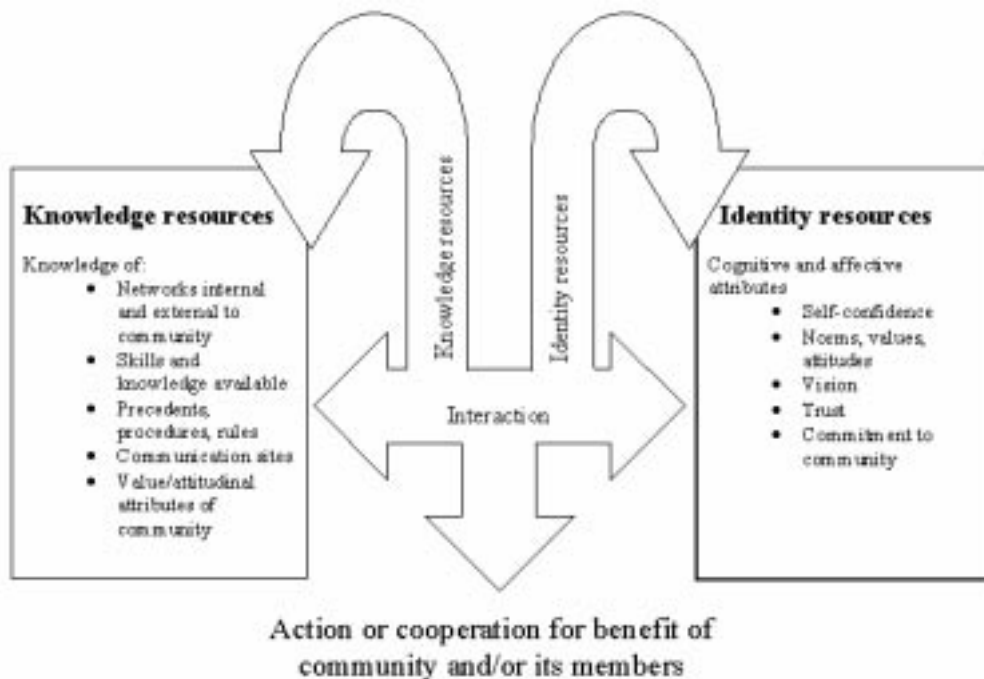
The activity of the international networks involved in the Deserve preparation and implementation, as well as the one of the national networks mobilised in the implementation of the

local projects, especially in Finland, is analysed. Distinct sections of the paper address the situation of the international partnership and perceived transfers on one hand, and the local projects operational reality on the other. Some factors facilitating the occurrence of socially innovative solutions as well as their sustainability are identified. The data used to conduct the analyses are the data provided by the internal monitoring of the Deserve project.

## Conceptual inputs

82 The traditional discourse about *social networks* would usually take into consideration the web of relationships existent in a certain place, relating them to norms, values and trust. If we see them in terms of resources and we take producing benefits into consideration, then we have a good synthesis in the approach proposed by Falk and Kilpatrick, according to whom social capital could be simultaneously built and used. Producing desirable outcomes is not strictly related to having the right ingredients, they are only a useful precondition. The characteristics of social interactions, the way they are shaped, with or without the consideration of the existing complementary resources, might allow for a successful result or, on the opposite, might hinder it. Their “assumption is that the interactive learning is the *process* which results in the accumulation of social capital as the *outcome* of the process” (Falk, Kilpatrick 1999, p.7). In building their reply to the question “*What is the nature of interactive productivity between the local networks in a rural community?*” (Same source, p.8), they work with two other assumptions, one taking into consideration learning as a bi-dimensional variable, fed in by both process and contextual inputs. “The third assumption is that social capital is a resource, built in learning interactions, which can be stored and drawn on. It can, therefore, be depleted (Coleman 1990:318-321)”, (Falk, Kilpatrick 1999, p.7).

They used ethnographic techniques in their whole-community case study, analysing their data collected from the participants<sup>4</sup> by using detailed conversation analyses, manual thematic techniques for content analysis, software customised package, linguistic principles and indicator development related to grounded theory. As a result, they mapped the knowledge and identity resources used in social interactions allowing producing action or co-operation for the benefit of the community.



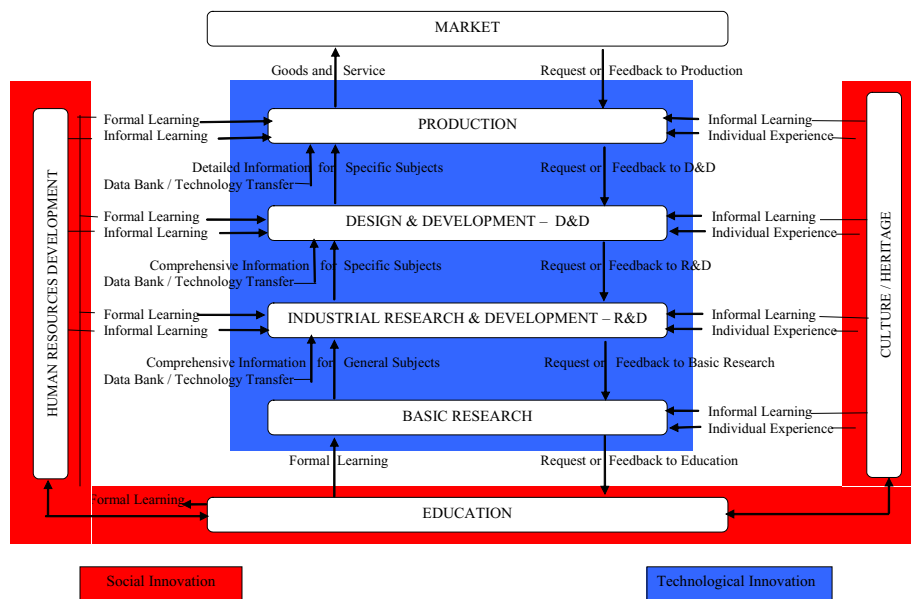
**Fig. 1:** Simultaneous building and using social capital Falk, Kilpatrick 1999, p.16

Therefore, the mere existence of social networks in a community is not enough to produce benefits. There is a need to make use of the knowledge residing in them, such as being aware of alternative networks, skills, procedures, communication and attitudinal attributes of the community. But the results of the interactions are also influenced by the identity resources, by the cognitive and affective attributes of the community, and the authors included here the self-confidence, norms, values, attitudes, vision, trust as well as the commitment to the community. Learning through interactions (formal, non-formal or informal) enhances the value of all these components of knowledge and identity resources and allows the formation of benefits.

Another perspective on learning and its contribution to fostering social innovation has been provided in 1997 by Darius Mahdjoubi. In his paper, social innovations occur as a way to integrate technical innovation through social learning.

He is taking into consideration the OECD definitions of technological and social innovation and their corresponding features, as well as a number of other articles on the learning (informal, nonformal and formal), information and knowledge circulation. A summary of the concluding relationships between technological and social innovation is presented in the next figure.

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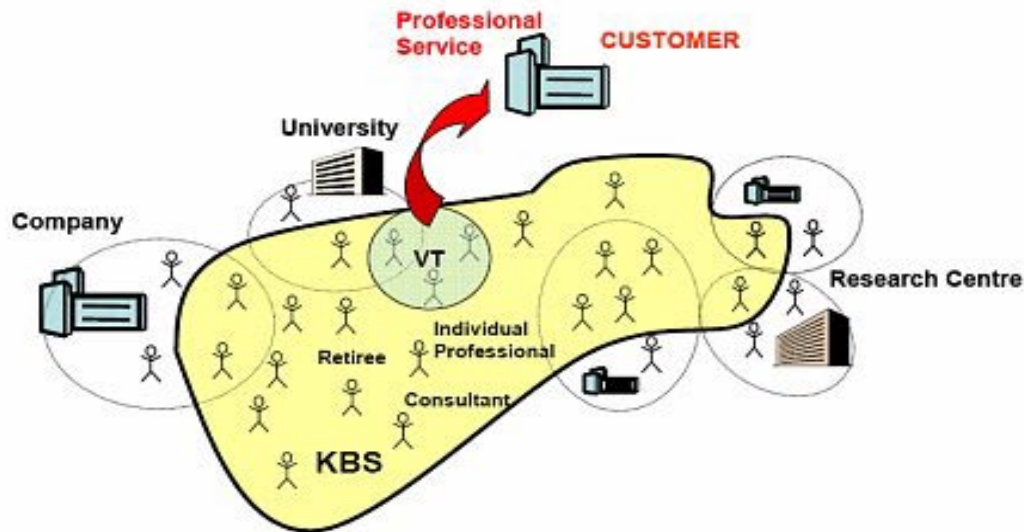


**Fig. 2:** Integration between technological innovation and social learning, after Mahdjoubi, 1997

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According to him, social innovation and technological innovations systems support each other. This is just one way to reflect upon the social innovation. The concurrent innovation paradigm proposes a more complex look on social innovation accounting for the type of actors involved in the interaction as well as a cycle perspective on the innovation.

A central element of the Concurrent Innovation paradigm is “the human centric KBS virtual professional communities, which are intended to interplay in entanglement with traditional business entities, as well as with collaborative networked organizations such as companies’ clusters and Virtual Enterprises” (Santoro, Bifulco, 2006, p. 2). Knowledge Business Social Community consists of various members, such as researchers, individual professionals, authorities, aiming at addressing agreed business activities. The actual activity is carried on by virtual teams (VT in the next figure) balancing between the achievement of certain results and self-fulfillment of the members and generating value by interaction, sharing and collaboration.



**Fig. 3:** The KBS Virtual Professional community, Santoro & Bifulco 2006, p. 3

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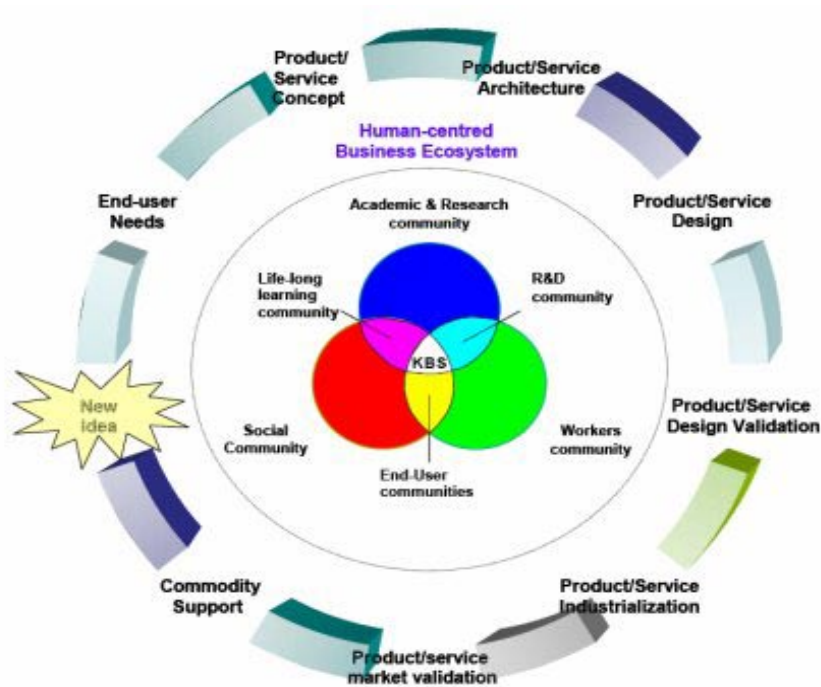
While communities of practice share more of the knowledge and social dimensions, the KBS community works in a more oriented manner towards the achievement of certain outcomes.

The authors pick up two types of such communities, “Incipient discipline KBS communities”, potential creators of new knowledge disciplines and “Challenge-oriented KBS communities”, where the knowledge purpose is less specified, but the activity is decided upon “(for instance the definition of the next generation of a certain kind of product/service)”, Santoro, Bifulco, 2006, p. 4. The key features of the concurrent innovation paradigm are co-creation, shared intent and problem identification.

As scope, it has to feed in social innovation lifecycle. From strategic perspective, it has human focus and the strategic objectives are to increase **creativity** through full realization of the individuals’ human potential, to foster innovation driven business competitiveness and to enhance the capability of determining systemic innovations (same source, p. 7).

Social innovation lifecycle is placing the knowledge creation and the activity of the KBS community in the centre of the cycle, in this manner a larger probability to achieve systemic innovations occurs. The next figure illustrates such a cycle.





86 **Fig. 4:** The reference phases of the innovation cycle and the human-centric business ecosystem of knowledge workers, Santoro & Bifulco 2006, p. 9

As a conclusion, the authors consider that the “Concurrent Innovation is intended as a systematic process allowing the realization of a “collective intelligence” out of all the individual intellectual capabilities involved in the development of new products and services, able to attain higher level capabilities”, Santoro, Bifulco, 2006, p. 11.

Maximizing the individual capabilities while having them involved in innovative activities was indeed covered also by the empowerment perspective.

“Citizens should have an active role in innovation policy. Improving citizen empowerment, the use of participatory politics stimulates as well the potential occurrence of new innovations. Open society with the full civil rights also encourages the appearance the new innovations. Innovations are easily seen as privileges of cultural and economical elites of society and it is not often seen that innovations are also part of citizens every day life. Innovations born and develop when citizens try to find new ways of solve problems occurred in everyday life. For example in ICT many innovations have occurred when people have played and tried to do new things” (Ali-Yrkkö et.al 2006, p.66.).

Consequently, particularly the interactions between citizens are generators for new innovations. We see innovations as social constructions (social constructive paradigm of innovations). From this perspective, every innovation, even the most technical one, is a social innovation.

In this conceptual frame, our paper tries to briefly analyse a practical example of service

delivery. Based on the replies of the partnership members, we try to assess in what extent the social networks involved in the project ended up being productive, i.e. producing social capital and being innovative.

### **Deserve case: General Description**

“DESERVE Delivery services in rural and remote areas is a Northern Periphery Project aimed at addressing the problems related to service access in the peripheral regions of Scotland, Sweden, Finland and Iceland. The current activity started in 2004 and is due to conclude in 2007. The project was previously organised during preparation work also supported by the NPP (Northern Periphery Programme). Developing new services and transferring models of interests for partners in the four countries are the main means used for reaching the assumed general objective: to establish the transferability of models of service delivery to remote and rural areas among the participating partner regions within the Northern Periphery. .... The emphasis is on models of service delivery for remote and rural areas rather than on the specific services provided in these areas.

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The rationale for this is that the sectors may be able to learn lessons from one another. The partners are also keen to establish the extent to which models must be adapted to suit local contexts. The long-term view is that the models ‘borrowed’ from partners will be mainstreamed across the Northern Periphery partnership. The main objectives of the project are: to improve the viability of service provision, to test the transferability of models of rural service delivery among partners by implementing models employed in other partner regions, transferring and testing ideas and practices, to establish the extent to which these models must be adapted to suit regional contexts: how flexible they are and what barriers to success exist, to improve the delivery of services to remote and rural areas within the northern periphery region, to improve accessibility of services within the northern periphery region by mainstreaming the new approaches across the transnational partnership area” (Aldea-Partanen 2005, p. 11-12).

In practical terms, this translated in exchanging information on the certain practical examples of service delivery, picked from the partner countries: Scotland, Sweden, Iceland and Finland. In the first stage of the project, the agreed service delivery examples were described for the use of all partners, together with the specific settings of the regional and rural development in each country. In the second stage of the project, new service delivery pilot projects have been implemented in Scotland, Sweden and Finland. The end of first stage and the beginning of the second one were overlapping in practice. The study trips have also been used as a tool for transferring knowledge (see Aldea-Partanen 2005, and also Lehto & Oksa 2006).

The Iceland descriptions referred to a newly running project, “Smart Communities” part of the country regional policy. The model of “Smart Communities” is also a transferred one, the initial

inspiration point being found in Canada, Nova Scotia. The inspiration source was considered in a critical manner and analysed for a couple of years based on the existing documentation and also with the help of a study trip.

In 2004, all municipalities were invited to submit their proposals and two projects were selected: “South3” and “Mobilise All”. The “South 3” project uses high-tech methods to reorganise various administrative processes in the three municipalities located in Southern part of Iceland. “The major strength of this project is that it involves broad schedules of information and high-tech society” (Kristjánsson 2004, p.3). The project located in Northern Iceland aims at building info-squares where various public and commercial service providers from three municipalities in the Husavik area make available certain forms and services online, therefore the application procedure is speeded up by cutting the queuing time. Furthermore, involvement of all the citizens in the area to use at least some of the electronic services, thus improving their familiarity with the internet culture was targeted as well. In the autumn of 2006, the technical infrastructure was made available and the compatibility between different programmes used by different service providers was agreed upon.

The Scotland example described the way of functioning of local Village Halls as local service providers mobilising the voluntary resources available in the area. Though the Village Hall tradition is quite old and extended in the rural Scotland, there is no unique model of such service delivery. Usually, the locally available services reply to the needs of the community, whether they are social or educational. The most efficient Village Halls fill in the deficit of service provision in the remote areas, supplying services to the local community, in a sustainable manner.

Multi-service rural shops as part of *the Village Shop* programme in Sweden are a relevant example to revitalise a key player in the rural communities. The competence and development programme is carried on by the Association for the promotion of village stores in Sweden. A combination of educational materials and mentoring is made available for the village shops selected to be revitalised. The *Village shop* package is meant also to create better co-operation between actors from commercial and public sectors.

Finnish practical examples of service delivery were provided through descriptions and during the study trip. Among the described examples of service delivery, one can find traditional and innovative mobile services, joint-service points, and information citizens’ networks. The mobile shops and libraries were mapped in a survey carried on in two regions of Finland, Kainuu and North Karelia, in 2004; though the efficiency of such traditional mobile services proved to be quite low, making the service available through mobile means has been a relevant inspiration source. Also innovative mobile services have been identified, such as Eno and Pyhäselkä mobile voting bus, the Pyhäselkä’s Power Vehicle – mobile gym offering to the elders a possibility of exercising, and the “mobile nurse” using mobile devices during her home visits. The regional citizens’ networks established through such programmes as OSKU at regional and local level have also been described as an example of getting the rural population familiar with internet services and connecting local to national or international

levels. Other provided examples have been the joint-service points, part of the national plan, where public-private partnerships may be witnessed.

“The knowledge pot” has been made available for the international partners and planning the implementation have been starting. However, while transferring knowledge in successful manner one has to take into consideration the local networks and to involve them in the planning processes in a participatory manner. (Aldea-Partanen 2003, Ponnikas 2003 –Ph.D. thesis).

### **International Partnership: network or networks?**

The initial starting network of international partnership consists of Scottish Council for Voluntary Organisation, Argyll and Bute Council, Scottish Executive, Country of Administration Board of Västerbotten, Skellefteå Municipality, University of Oulu – Kajaani University Consortium –Lönnrot Institute, University of Joensuu – Karelian Institute, ProAgria Kainuu and Institute for Regional Development. The network put together partners from Scotland, Sweden, Finland and Iceland, representatives of voluntary sectors and public administrations as well as research.

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The initial agreement on the problem to be addressed existed since 2004: service delivery in rural and remote area is challenged by aging population and out-migration. There was also a shared intent to address this challenge through pilot service provision taking into consideration the experience accumulated by the partners from the other countries. But there have been initially communication differences, as for some partners research has been perceived, at least in the beginning, a needless part of the project, while action research documenting the on-going processes of transfer and implementation has been seen as crucial by other partners of the network. However, the initially agreed common intent – provision of services, customised to local needs and borrowing elements from the other countries – has kept the network together and proved to be the oil assuring efficient functioning in the end. If we consider the concurrent innovation paradigm, we could say that the formed network is close to a virtual team, its functioning uniting together inputs from knowledge, business and social spheres. The social character of the network was especially active during the study tours. The study tours usually also acted as a toll to access knowledge and facilitate transfers, the process did not occur in a rigid manner of transposing a model from one place to another, it happened in a smoother, softer way, in which ideas were picked and then customised to the local needs and institutional settings. In this context, we might consider that that we have in Deserve knowledge business social networks. If we consider the Triple Helix paradigm, then the actual structure of partnership includes representatives from regional administration, universities’ research centres and involves also some of the service providers to the local communities. In Deserve context, the business of the network is the service delivery, therefore government-public research-business partnership exists. But is any innovation occurring? Is any significant change made?

In September 2005 and March 2006, there have been gathered the responses of main attendees to study trips and international seminars with respect to the nature of transfers and the contribution of partnership to own activities. Based on the results, several kinds of transfers have been perceived. For instance, in Cowal peninsula, the public transport is scarce, the roads are narrow and the disabled and aged persons have particularly limited access to services. As a reply to the local needs, in Dunoon, a transport service point has started under Deserve Scotland, and the mobile services served as an inspiration source for the transport initiative, as the Scots mention in their replies. After the project manager attended the early 2005 study trip, the Seniorpolis<sup>5</sup> as well has been considered as an inspiration source. “Seniorpolis considers old people as a sort of resource and this expertise centre is built after a 3-year history of various projects targeting the elderly. The elderly do not form a homogeneous group and the mayor of Ristijärvi is using the concept promoted by professor Simo Koskinen from the University of Lapland which classifies retirees on a pension into three groups “go go”, “slow go” and “no go”, depending on the seniors’ activity capabilities and desires. “Go go” and “slow go” are the targets of the Seniorpolis (Aldea-Partanen 2005)”, which aims “to develop a uniform and extensive service selection to satisfy the needs and requirements of senior citizens” (Seniorpolis brochure, page 4). Cowal Deserve’s project co-ordinator states that “ in Cowal we have implemented elements of a Finnish model which is all about “getting people to services and services to people.” It is similar to a community transport initiative, but the emphasis is firmly on our clients and what they need to do rather than upon vehicle pathways” (Patterson 2005, p. 12). The transport service running in the Cowal peninsula provides the inhabitants in the area with a flexible service, allowing in certain days to access agreed service delivery points, as well as replying to their punctual needs in the possible extent. The innovation consisted of new service developed, combing the local support of regional authorities, Argyll and Bute Council, as well as European funds and volunteer work.

Scottish Village Halls proved to give very attractive examples and a number of attendees of various study trips have later on incorporated to a larger or smaller extent the experience gained in their work. Rusksele, a remote rural location in Västerbotten region has been inspired by the Scottish model of work and similar arrangements have been made, in spite of not so similar institutional

<sup>5</sup> Seniorpolis is a “unique Finnish concept for senior citizens” as the informational brochure tells in English.

“The Seniorpolis expertise centre, with managerial headquarters in the municipality of Ristijärvi, Finland, develops business operations that promote well-being and lifestyle opportunities for senior citizens. Seniorpolis, in co-operation with universities, research institutes and technical high schools promotes know-how, technology, product development and business concepts within different senior citizen services. Seniorpolis provides variety and choices in lifestyle for today’s senior citizens. Seniorpolis co-ordinates and supports a large number of different projects” (Seniorpolis brochure, page 2).

settings. Practically, in this case study trip also connected two different local social networks and allowed joint learning from one another. The gains and innovative activities are more numerous in Sweden, Ruskele is just on of the illustrative examples in which local partnership involved private and private sectors to optimise the service supply in the community.

### Finnish examples – connecting local to international?

The Finnish approach was multi-level one, aiming at building networks of specialists from regional and local government as well as actors involved in service delivery at programme level and village level workers allowing for various forms of transfer to occur, and also building the needed understanding for implementation of the pilot projects and activities. A general model condensing the main activities running under the Deserve Finland appears in the next chart.

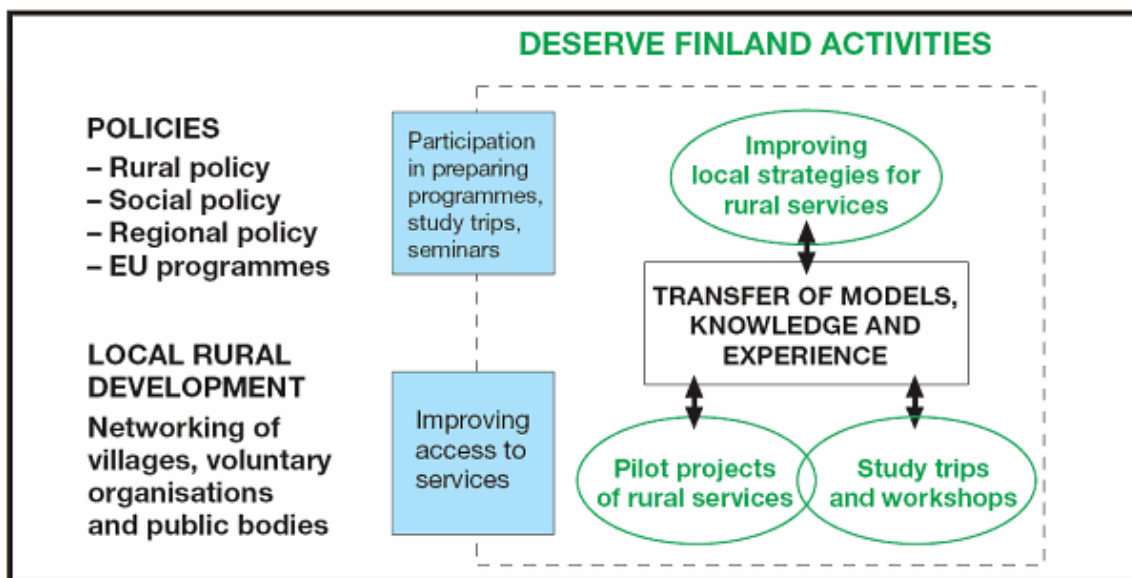


Fig. 5: Deserve Finland: activities and actors

Getting accustomed with examples from Scotland, Sweden and Iceland has been acquired through workshops alternating presentations from abroad with examples of on-going service delivery from Kainuu and North Karelia. Better knowledge was accessed through actual study trips in Scotland and Sweden, each of them followed by seminars sharing the acquired knowledge and its relevance to local work. Following in a smooth manner the expectations and achievements of Finnish members of the network before and after study trips not only allowed for a better understanding of the common problems and approaches in solving them, but also stimulated a more active incorporation of the service delivery into the activities of regional, programme and village level actors. Explicit mention of the



strategic importance of services in programme documents allows the continuation of addressing the service matters through other financing channels. The familiarity with alternative models of service delivery encourages future incorporation of the alternative solutions in the new local contexts, in a customised manner.

Implementation of pilot projects in Finland has been based on competition, having as starting point a flexible model of service delivery with common features: multi-service help point should be located at the village level and it should allow for the improvement of the access to services through the development of a multi-purpose service point delivering services connect with at least one of the following areas: social and health care, citizens' feedback to the public authorities activity, administrative and communication services. In the letter inviting 150 village associations from Kainuu to apply for funds, it was specified that the funds might be used for improvement of technology, training and knowledge or for the experience exchange with other Deserve countries. Deserve Finland funded six pilot projects located in Kainuu, in various locations. The implementation of each one of them has mobilised different kinds of local actors, therefore different kind of partnerships have been active while a research facility has been micro-managing, whenever needed, the grass root level activities.

Active Senior is an initiative of active village organisations located in a remote village. They have ran the pilot project by "organising activation days" where alternative services are made available to seniors in the Village Hall located in a former school. Transport to the village hall has been assured either by the local project leader or by the village taxi for the seniors who could not access the event otherwise. After running the project during November 2005 - February 2006, they will restart in a new form the Active Senior during October – December 2006. The participation of the Village Association representative in the study trip to Sweden allowed also for reactivating the interest for the village shop. Looking for solutions in Northern Sweden and in the neighbouring county of North Karelia helped the village association to find solutions for one key local actor – the village shop.

"New mobile technology proposed by the Ristijärvi village association in co-operation with Seniorpolis' representatives. The village aims to test the use of new mobile technology – the Soneco call carephone. The individuals using the new mobile technology have had initial training and their experiences evaluated. The new mobile technology device is being tested by senior citizens, children and caregivers from Ristijärvi and some of its remote hamlets" (Finnish leaflet 2006, p.3).

"Hiisi care project is carried out by Family Unit Jukola Art and Care, in co-operation with the local village association, with support from the municipality. Monthly health evenings, organised under certain themes, allow health services to be provided to the villagers in an innovative and friendly manner. A short questionnaire allowed the mapping of the villagers' needs and enabled them to indicate the range of health services they expected to be offered. Carers, senior citizens, children and people with disabilities came together at the friendly evening events to benefit from the sharing of health information and informal discussion. There is also an opportunity to have blood pressure, cholesterol and blood sugar levels measured" (Finnish leaflet 2006, p.3).



“Heinämäki village association started the Heinis networking project, providing technological services to the villagers. In the village hall and its surroundings, several technological facilities have been made available: wireless internet network, cable internet network, alarm-system, automatic heating system and digital TV. The network services will be developed while training several target groups from the villagers. Such services will include: a virtual market square allowing for marketing of villagers’ products and services; selling and buying various products, as well as customer-related services responding to the needs of local villagers and summer inhabitants” (Finnish leaflet 2006, p.3). Specific to Heinämäki village association is a marketing approach in the village association activity, mapping different kind of inhabitants and their needs and capabilities, as well as marketing the relevant features.

“Nakertaja-Hetteenmäki village association’s ambition is to set an example for others in Finland and abroad. The active and experienced village association, located in the vicinity of Kajaani, trains three different target groups – schools, kindergartens and youth club – to use net TV in their regular activities, according to local needs. After joint meetings with the members of the target groups, customised training packages are designed to allow the development of concrete activities serving the needs of the groups, e.g. virtual parents’ evenings (school) or virtual organisational meetings (kindergarten). The training will be continued as a learning and development process, by experimenting and developing the most suitable net TV package according to the target groups’ needs” (Finnish leaflet 2006, p.3). In the end of September the first rural digital studio was put together in Vanahis Village Hall and some of the presentations delivered in Deserve international meeting have been broadcasted via internet and the viewers from around the world (e.g. different parts of Scotland) have had access to the presentations. The broadcasting via internet allows interactions with the viewers by a multitude of channels. Using video facilities to address access of the services has a certain novelty character.

“Vuolijoki’s electronic business point is run by the Vuolijoki municipality in the villages of Vuottolahti and Ojanperä, where the two village shops, Aho and Ojanperä, were equipped to become a multi-service point in the manner of the Swedish shops. The modern computers, equipped with internet connections and webcams, have been sited in the shops and access is free of charge. This allows various other services to be accessed using the internet e.g. bank services. Osuuspankki Bank even provided training on how to use its electronic services for payments. The presence of the computers in the shop contributed to the villagers becoming familiar with the internet, and an electronic notice board will be built in co-operation with the municipality” (Finnish leaflet 2006, p.4) In September 2006 the village shops internet web-pages were almost ready and they allow connecting to the shops to remote villagers, as well as to the seasonal visitors who might be interested to order their products beforehand so that they are available upon arrival.

The implementation has proved so far that various social networks could be used to develop local solutions. By activating local representatives, the empowerment of local people assures in a better manner the chance for sustainable innovative environment. The internet connection proves to

be used in different ways to connect different local groups, and also to allow a larger population to get to know activities in remote Finland. If we refer to the concurrent innovation, we might consider that the networks active at local level are challenge-oriented KBS networks, trying to redefine the concept of service delivery in rural and remote locations

## Conclusions

What is the role of social networks in implementation of the innovative solutions? The social networks forming reliable partnerships have greater chances of identifying sustainable solutions.

What do networks need to become innovative? The socially innovative networks need a flexible environment and a shared intent; they need joint learning and Triple Helix partnerships. Flexibility of the environment influences the innovativeness.

Fundamental parts of social capital make innovations more likely to occur. Such parts like trust between the members of the community, members' commitments to the community they belong, openness of the community, allow innovations to develop. Acceptance of a variety of people, a multicultural environment and judging the content of the ideas based on their quality and not on the status of the presenter, also facilitates the occurrence of the innovations. The shared intent is service provision in Deserve case, but any clearly oriented activity gives pragmatic content to the activity of the social networks. The joint learning processes occur during study trips and workshops or seminar allowing sharing different perspectives on the individual interests and activities related to the shared intent. Triple Helix partnership provides the needed diversity and the complementary competences facilitating innovative processes.

Do technological innovation and social innovation hinder or stimulate each other? Social innovation can be based on technological innovation, as it can be seen for instance in the case of the NET TV used to better connect parents of children facing certain problems with the teachers of the school.

Social innovation can be seen as a new way of doing things together, as a new combination of players which creates new networks and communalities. In the case of the Nakertaja networking pilot project, new manner of parents' evening allowing for bringing in sensitive problems is such an example of using technological innovation to create new solutions.

One dimension in social innovations is the creating of new ways of communalities and commitment to society. New ways of doing things via social innovations foster people's commitments to society and strengthen people's social capital (Oksa & all 2003). Social capital formation and innovation occurrence stimulate and are conditioned by each other. The joint learning processes encouraged different actors to think through the alternative solutions, providing services in a new manner. Understanding technological innovation not as pure technical advance or fashion, but finding their social role in a certain context, replying to a shared intent (here service delivery), stimulates finding innovation solutions.

## References

- Aldea-Partanen, Andra. 2003. Local Development Networks in Remote Areas and Knowledge Management. Paper submitted to Knowledge Board Summer School. San Sebastian. Spain
- Aldea-Partanen, Andra. 2005. Transferring Experiences in Nordic Peripheries. Paper submitted to Tampere Summer School on European Peripheries
- <http://www.kajaaninyliopistokeskus.oulu.fi/proj/alupro/DESERVETransferknowledgepaper0508.pdf>
- Ali-Yrkkö, Jyrki, Honkanen, Petri, Hyysalo, Sampsa & Uotinen, Johanna. 2006. Globalisaatio, innovaatio ja kansalaisuus – ProACTiivisia näkökulmia innovaatiopolitiikkaan.
- Falk, Ian and Sue Kilpatrick. 1999. What is Social Capital. A study of interaction in a rural community. Centre for Research and Learning in Regional Australia CRLRA. Paper D5/1999 in Discussion Paper Series
- Kristjánsson, Halldor. 2004. Current reality of rural development. Report submitted as part of Deserve NPP project <http://cc.joensuu.fi/%7Ealma/deserve/raportit/rep04-iceland.doc>
- Mahdjoubi, Darius. 1997. Social Innovation: Integrating Learning and Technological Innovation
- 95 Oksa, Jukka and Esko Lehto. 2006. Transferring models: the study trip as a tool. Paper produced in January 2006, [http://cc.joensuu.fi/%7Ealma/deserve/raportit/study\\_report\\_FI\\_2006.pdf](http://cc.joensuu.fi/%7Ealma/deserve/raportit/study_report_FI_2006.pdf)
- Oksa, Jukka, Tuuva, Sari, and Johanna Uotinen. 2004. Kansalaisuus sosiaalisen innovaation lähteenä. Tarmo Lemola & Petri Honkanen (ed.) Innovaatiopolitiikka - Kenen hyväksi, keiden ehdoilla? Gaudeamus, Helsinki 2004, p. 202 - 214
- Patterson, Bridget. 2005. "Getting people to services and services to people" in "VIEW. Policy Insights from Scottish Civil Society". Issue 1: Summer 2005, published by Scottish Council for Voluntary Organisations, p. 12-13
- Ponnikas, Jouni. 2003. Globaali-käsitepaikallisessakontekstissa: Kestävänkehityksenpaikallistuminen Pohjois-Pohjanmaan ja Kainuun EU:n aluepolitiikan toimijoiden mielipideilmastossa (*Sustainable development in Northern Ostrobothnia and Kainuu. The views of policymakers on sustainable development during the period 1995-2002*).  
[http://www.kajaaninyliopistokeskus.oulu.fi/julkaisut/researchreports/RR9\\_Vaitos\\_JouniPonnikas.pdf](http://www.kajaaninyliopistokeskus.oulu.fi/julkaisut/researchreports/RR9_Vaitos_JouniPonnikas.pdf)
- Santoro, Roberto and Andrea Bifulco. 2006. The "Concurrent Innovation" paradigm for Integrated Product/Service Development. ESoCE-NET White Paper
- \*\*\*. Seniorpolis Brochure. 2005
- \*\*\*. Finnish Deserve Leaflet. 2006

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## **Work, well-being, creativity and successful management - mission impossible?**

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### **Long introduction**

Modern management philosophies are in one way or another pursuing a rational approach, which in principle means that an organisation is seen as a system. These philosophies even emphasise the systematic approach when they utilize numerous tools and methods inside the managerial practices. (e.g Dale 1994, Oakland 1995). This doesn't necessarily support the utilization of creative resources hidden in the processes and in the structure of organisation. There are some approaches, however, which emphasize the human elements in the organisation management. (e.g Horvath 1999, Lam 1998, Nonaka and Takeuchi (1995). The history of industry has, however, pointed out that the most valuable strides are produced creatively rather than systematically (Ferguson 1977, 1993). Therefore it is reasonable, at least, to question the variety of current management philosophies.

This paper discusses work, well-being, possibilities for creativity to emerge and successful management in relation to these. What is well-being at work as a phenomenon? Is the responsibility of well-being at work on the shoulders of individuals through their own motivation, should an

organisation promote well-being with their orientation, or does society create breeding ground for well-being at work with its own basic values? Should we move from nurturing occupational exhaustion into promoting well-being at work? Literature does not offer models or solutions on how the leadership or the individual's role as a target of leadership should be assessed, when successful management is analyzed from an organisational targets point of view. Should we optimize individual well-being or can organisational targets justify ignoring individual aims? The western management culture originates from the organisation's targets partially at the xpense of the individuals. The task of the leadership is to define where the limits of individual well-being are drawn.

Creativity and innovations are mentioned as success factors for organisations almost everywhere. These should be acquired on every level of the organisation. But what is the reality, and how does it emerge to researchers outside the organisation? Are we able to find means or models of improving well-being at work trough creativity? Individuals are the sources of novel ideas and the foundation for tacit knowledge – why or where do the numerous ideas concerning work, conditions of working and so on get lost, even if we have some means of empowerment and participative continuous improvement. Can we afford to do this, what is this all about, and first and foremost, what are we able to do for this?

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Modern management models are pursuing systematic models on the operations of organisations in order to make them more easily controllable (e.g. Dale 1994, Oakland 1995, Rickards 1988). However, these mechanisms are restricting the organisations' ability to be creative (Ferguson 1977, 1993), in other words situations where a human being would be most effective from his or her own point of view. Utilizing an individual's whole capacity, an organization's control mechanisms of management models form a paradigm, where right answers do not exist. How then can this be managed, while an unmanaged organisation is heading towards chaos?

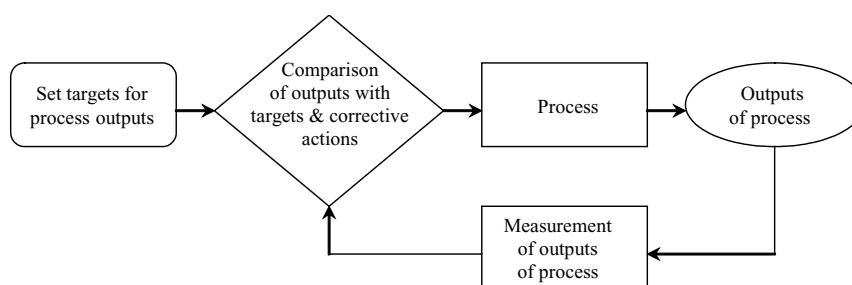
The main aim of this paper is to *raise wider and profound discussion on the possibilities to connect management, creativity and well-being at work*. The purpose is to compile organisational targets from the effectiveness and individual targets from the well-being point of view. To achieve this we will review some management literature, in order to present some models on how some managerial aspects have evolved. Then we will go deeper on some literature of creativity, in order to reveal the effectiveness of it. From the point of view of well-being at work, where there is very little research, we will briefly reflect on some experiences, and finally we will analyze the subject in its entirety. When answering these questions the emphasis is more on evoking discussion of the management philosophies and the utilization of different methods and tools in practice rather than on producing final conclusions. This is very important, because the utilization of different tools and methods seems to be the main goal, not the contents or meaning

## Systems approach as a basis of management

Present practice and science concentrates on the development of different systematic theories and methods to be utilized in every day management. Therefore the trend towards systematic methods and theories can be found to be determinative today, in the world of science and also in the business world. The reason for this is an ambition to manage and control every activity in companies or in organizations. This is usually done when pursuing effectiveness and finally in the name of business. Present and future management practices as slaves of information technology will even increase the dependence on the systems. Since e.g. Harrington (2000) sees that in the 21<sup>st</sup> century the accelerating rate of change will continue to be driven principally by the exponential growth and global availability of information, technologies and technology-based infrastructure. However, information technology systems are limited by hardware and software, and may therefore lead to an even more systematic approach.

Total Quality Management (TQM) is an example of a comprehensive approach for managing business. It is currently a common management philosophy in business. It pursues a certain system to manage operations, which is based on man's desire to seek for rational ways to operate. All action should be *planned*, *controlled* and *measured* in TQM. The quality management system is defined in Ollila (1995) and it is one way of *controlling* the "system": "A quality system is the organisational structure, responsibilities, procedures, processes and resources for implementing quality management." In other words a quality system defines very accurately the methods, routines, organisational solutions and responsibilities needed to achieve goals. The role of information is crucial, while regarding quality system as a cybernetic process (figure 1), it is essential to obtain measurable results.

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**Figure 1.** Quality system as a cybernetic process or model (Ollila 1995)



Examples from *measuring* are Balanced Scorecard (BS) and performance measurement systems (PMS). They require solid basis and system in order to provide reliable information to the management as in the example presented in figure 1. Furthermore the utilization of these indications has to be conducted into practical indications and this too needs some kind of mechanism in order to work. It is also typical that control is aimed to the future in order to get indications for the management for the future. (Dale 1994, Oakland 1995)

Ojanen *et al.* (1999A, 1999B) have presented a set of measurement proposals for research and development work in order to control operations. According to their survey only very few of the indicators are suitable for most companies. This reflects the complexity of the research and development and design activities and the impossibility to create a common set of measures. Therefore, choosing the right measures from the whole company's point of view is a real problem. In design it is also problematic to determine the objects to be measured and to control the whole measurement system. According to Ojanen *et al.* (1999A, 1999B) there are no systematic ways to select research and development performance measures at the company level. This is very difficult from the research and development point of view, because the progress or results of design cannot be forecasted or even measured in a reasonable way.

99 The concept of systematic approach is not clearly understood or defined in business management. Systems are usually seen as organisms, which are entities like organizations. This means that there is variation inside the system. This is true in real life processes where variables like humans or natural resources form a part. E.g. Karjalainen and Karjalainen (2000) emphasize that system refers to entity and organization. They see system thinking as a form of scientific thinking, which considers real life phenomena as an entity. A system is a group of sections, which are in interaction with each other in order to achieve something. This definition is quite close the concept used with quality standards and criteria for excellence in quality awards.

Another synonym to system is mechanism, which refers to a system where no variation is allowed. With the same input you must always have exactly the same output, otherwise it will not be a true system. This is more like a natural science approach to the concept, while the former approach comes more from the social sciences.

## **Creative approach**

Creativity is the human ability to produce new ideas and solutions. That is also the ideal goal of business, to try and create new individual products or services with the available resources, in order to get a successful business in the long run. This must have at least some influence when planning management practices for organization. As Bohm and Peat (1992) point out, there have to be irrational elements in life, business and also in science. If new knowledge is totally based on the existing one, the generation of novel ideas and directions will be scarce.



Creativity is a normal activity of the brain and the whole human body. It is also a primary quality of every human being. (Bergström 1984). By using intuitive methods man can solve problems which can not even be determined logically (Richards 1974). Creative problem-solving, its development, its applications and producing innovations have become more and more popular in recent years. Interest towards utilizing hidden resources has increased in science, art and in education, but particularly in business and industry. All possible utility and capacity should be exploited when pursuing innovations and efficiency. Some (Savolainen *et al.* 1999) have even tried to combine creative and rational problem-solving in order to generate a systematic creative method as an answer to these questions.

However, one of the most difficult phases is creative synthesis, in order to have practical processes, products or services. According to Savolainen *et al.* (1999) one should first imagine a problem and its forthcoming solution and then build a logical path backwards. According to de Bonos (1971, 1990) lateral thinking is a process and a set of techniques, which demystify the creative process by providing thinking tools and a conceptual framework. His well-known descriptive metaphor of problem-solving process is "digging a hole deeper". Formerly there was only vertical thinking and it is only through the use of lateral thinking that we can escape from the hole and "find something else to dig". The need for lateral thinking arises because the mind doesn't record successive data in an objective way, but produces understanding through creating patterns. New data is fitted into older patterns and also influences and reorganizes the older patterns. Also Buzan (1983) brings new or original ways to think as a source of novel ideas. He developed and introduced *mind maps* to expand or stimulate creative process. It is useful to reassemble and draw the map to a preferred order after the first drawing.

When scanning the field of management theories and practices there are some approaches, which touch the creativity in an organization or say it out loud, but surprisingly few of these approaches include creativity in an understandable or profound way. In recent literature knowledge management is the philosophy considering creativity. In the following knowledge management has been the main idea when approaching creativity – the ability to produce new ideas and solutions in an organization or in other words to develop the organization.

Knowledge management embodies organizational processes that seek synergistic combinations of data and information processing capacity of information technologies, and the creative and innovative capacity of human beings (Malhotra 1997). This strategic view of knowledge management considers the synergy between technological and behavioral issues as necessary for survival in 'wicked environments.' The need for synergy of technological and human capabilities is based on the distinction between the 'old world of business' and the 'new world of business.' Within this view, the '*old world of business*' is characterized by predictable environments in which the focus is on prediction and optimization based efficiencies. This is the world of competence based on 'information' as the strategic asset and the emphasis is on controlling the behavior of organizational agents toward fulfillment of pre-specified organizational goals and objectives. In contrast, the 'new world of business'

is characterized by high levels of uncertainty and inability to predict the future. Use of the information and control systems and compliance with pre-defined goals, objectives and best practices may not necessarily achieve long-term organizational competence. This is the world of 're-everything,' which challenges the assumptions underlying the 'accepted way of doing things.' This world needs the capability to understand the problems afresh given the changing environmental conditions. The focus is not only on finding the right answers but on finding the right questions. Knowledge management focuses on 'doing the right thing' instead of 'doing things right.'

Knowledge management is a framework within which the organization views all its processes as knowledge processes. In this view, all business processes involve creation, dissemination, renewal, and application of knowledge toward organizational sustenance and survival. This concept embodies a transition from the recently popular concept of 'information value chain' to a 'knowledge value chain.' (Nonaka & Takeuchi 1995) The difference here is that the information value chain considers technological systems as key components guiding the organization's business processes, while treating humans as relatively passive processors that implement 'best practices' archived in information databases. In contrast, the knowledge value chain treats human systems as key components that engage in continuous assessment of information archived in the technological systems. In this view, 'best practices' are not implemented without active inquiry by the human actors. Human actors engage in an active process of making sense to continuously assess the effectiveness of 'best practices.' The underlying premise is that the 'best practices' of yesterday may not be taken for granted as the 'best practices' of today or tomorrow. Hence, double loop learning, unlearning and relearning processes need to be designed into the organizational business processes.

Knowledge management is a necessity for companies because what worked yesterday may or may not work tomorrow, because change itself is the only constant variable. Considering a simple example, companies that were manufacturing the best quality of buggy whips became obsolete regardless of the efficiency of their processes since their product definition didn't keep up with the changing needs of the market. The same holds for assumptions about the optimal organization structure, the control and coordination systems, the motivation and incentive schemes, and so forth. To remain aligned with the dynamically changing needs of the business environment, organizations need to continuously assess their internal theories of business for ongoing effectiveness. That is the only viable means for ensuring that today's 'core competencies' do not become 'core rigidities' of tomorrow.

The most important issue for companies is to ensure that they focus on the creative and innovative capacity of their human members, and the synergy of data and information processing capacity of information technologies. The 'human sensors' that are interacting continuously on the front lines with the external environment have a rich understanding of the complexity of the phenomena and the changes that are occurring therein. Such sensors can help the organization synchronize its programmed routines ('best practices', etc.) with the external reality of the business environment.

Hence, organizational processes need to implement what is called 'loose tight' knowledge management systems. The tightening is in the reinforcing linkage between the archived organizational 'best practices' and the actions taken by organizational members based on that information. The loosening is in the reverse unraveling linkage between actions taken by organizational members [and their consequences] that serve as a continuous check for renewing the archived 'best practices.' This is where human creativity and innovation comes into the picture.

It is the role of management to connect two components that make up the "who," *knowledge owners* and *knowledge seekers*. The knowledge of one is transferred to the mind of the other, so that a new decision can be made or a situation handled. Knowledge management provides a means to capture and store passing knowledge and broker it to the appropriate individuals.

It is also critical to differentiate between two types of knowledge, *explicit knowledge* and *tacit knowledge*. The latter is the more valuable. Tacit knowledge is more hypothetical, subjective, personal and substantially more difficult to communicate. Tacit knowledge is the primary focus of many knowledge management initiatives, because it is the repository of an organization's most strategically valuable knowledge. (Nonaka & Takeuchi 1995)

Socialization of knowledge is a process of sharing experiences and thereby creating tacit knowledge such as mental models and technical skills. An individual can acquire tacit knowledge directly from others without using language. Apprentices work with their masters and learn or more like absorb craftsmanship not through language but through observation, imitation and practice. The key to acquiring tacit knowledge is experience. (Nonaka & Takeuchi 1995) Tuomaala (1999) emphasize the meaning of individual experience in learning too, but he emphasizes that knowledge must be grasped and internalized in order to utilize it in the future. (see also Kolb 1984).

The primary challenge of addressing explicit knowledge is managing its volume to ensure its relevance. A common deficiency facing organizations is information overload, as the levels of explicit knowledge become so overwhelming that it cannot be appropriately filtered. It is the management of explicit knowledge on which most organizations are focused. But as organizations make advancements in knowledge management, they realize that managing tacit knowledge is even more strategic. The challenge of managing tacit knowledge is formulating it into a communicable form and distributing it to the *knowledge seeker*.

The small start-up's and so-called high tech companies do possess only limited knowledge to ensure a healthy growth. Knowledge and competence even for some key areas of business might be external for long periods of time. Savidge (1994) has defined the company external knowledge resources as mentors, coaches, gurus and angels. These people in their roles support the management of any given company. The companies can utilize their skills to improve the strategic, tactical and operative performance.

## Well-being at work

There is meaningful work generating experiences of well-being. However, well-being and its emergence and development have been studied very little. Riikonen *et al.* (2002) have emphasized some reasons why we should be interested in meaningful work. The origins are morally problematic working places and tasks that are harmful and causing bad feelings. On the other hand people want to do work that creates a positive output. When employees get older and are getting closer to retirement (as the structure is in Finland) this should be considered even more carefully. Work that creates prosperity is better also from the quality point of view, while quality is a significant factor in business. Experiments of well-being will support health as an entity (physical, psychological and social health).

Globalization, information society and information technology, productivity requirements and also timetables and pressure are spreading fast but unequally to all fields, professions and demographical areas. Industrial safety and health are needed in the future, especially in securing safety and in developing interface between humans and technology. Examples of these are features of technology, healthiness and safety of work with ICT. Another mainstream in developing contents of work is according to Rantanen (2004) increased interaction, which presumes new kinds of education among other things in social and psychological knowledge and competencies. Also an increase in work with ICT and increase of human relationships in work require even stronger development of the mental and social working environment. We also have to consider continuous individual and organisational learning. Employees are getting older and therefore maintaining and advancing abilities and prevention of chronic diseases in the aging, but also in the other age groups is constantly in focus. Innovativeness is also setting new requirements for the personnel even in other areas than technological development. New competitive factors can be found for example from the area of human and social capital (i.e. innovations in information, content and process control). National science and technology council (in Finland) has emphasised that also creation of technological innovations requires social dimension parallel to technology and business. Activities for maintaining the ability to work, working environment and quality in it, industrial safety and health are the focal means to develop social dimension of working life and also the whole quality of life for working population. (e.g. Härmä & Nupponen, 2002; Katsaus 2000; Rantanen, 2004.)

Generally the ability to work has been seen as compatibility between human resources and work. Ilmarinen (2003) defines the ability to work as an entity, where health, knowledge, values, work and its organisation are built on. Health creates the basis for the ability to work, where physical, mental and social dimensions of capacity are influential. Next level is created by knowledge, which skills and capabilities are part of. In the third level the values, motivation and attitudes create human resources. Work composed of work community, working environment, requirements and exposure of work forms the fourth level. The core feature in this level is leadership, since managers have the possibilities, responsibilities and authorities in organizing the work. The model (Ilmarinen 2003)

presupposes also influences of external factors like family, close community and society to be part of the whole ability of work.

According to the research “Health 2000” (Gould 200) the possibilities of participating in decision-making of ones own work, versatile work, equitable leadership, good spirit of working place, functional organization of work, modern professional competence, and healthy and safe working environment will improve the ability to work. In theory of action, working ability has been connected to society, equipment, rules and division of work, which furthermore are as essential part of ability to work as employee with his or her qualities. Furthermore the concept of ability to work will be extended to contain the contextual entity of work. (e.g Mäkitalo 2001)

The latest research approaches (e.g. Maslach & Schaeferli 2001) on burn-out have contained two major extensions. Today burn-out has been defined as an occupational stress syndrome and as a crisis between the employee and work, which can emerge in any profession and in all areas in unfavorable conditions. (Schaeferli & Leiter 1996; Kalimo & Toppinen, 1997)

Another incipient change approach confronts the perspective of burn-out to the well-being at work. Maslach and Leiter (1997), who are pioneers of burn-out –research, have stated that well-being is the lack of burn-out symptoms (exhaustion, cynicism and diminished self-respect) i.e. energy, commitment, professional self-respect and stability. Schaeferli sees burn-out and well-being at work as opposites, but those should be studied regardless of each other and with separate methods. Schaeferli’s research group has defined work engagement (Hakanen, 2002) as a positive, stabile affective-motivational fulfillment state of employee, based on theoretical reasoning and empirical thematic interviews. This state is featured with vigor, dedication and absorption. (Maslach & Schaeferli 2001). Satisfaction at work, commitment on work, work engagement and “flow” describe the concept of well-being at work (Tuomi & Ilmarinen 1992, Csikszentmihalyi 2005), other concepts and metrics are describing well-being in reverse order.

Latest research has extended analysis of mental working conditions to working culture, management systems, influential possibilities of individuals and for example equitable management practices and work communities. In modern working life the problems of new mental and psychosocial problems of the working environment are emphasizes, while the traditional occupational diseases are withdrawn. (e.g. Piirainen *et al.* 2003, Rantanen, 2004.)

As motivated by the JDCS –model (Karazek & Theorell, 1990) (Job Demand-Control-Support model) researchers almost unanimously agree that the three psychosocial features of the model (work management, requirements and social support) are vital for individual well-being at work. However, discussion of the adequacy of these factors is still going on. (Kinnunen, Feldt, Mauno. ed. 2005.)

Csikszentmihalyi (1998) outlines in his theory that people are most happy when they are in a state of *flow* – it is a state of total oneness with the activity at hand and the situation. The idea of flow is identical to the feeling of being *in the zone* or *in the groove*. Csikszentmihalyi (1998) described flow as "being completely involved in an activity for its own sake. The ego falls away. Time flies.



Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you're using your skills to the utmost." To achieve a flow state, a balance must be struck between the challenge of the task and the skill of the performer. If the task is too easy or too difficult, flow cannot occur. Shortly said; flow could be described as a state where [attention](#), [motivation](#), and the [situation](#) meet, resulting in a kind of productive [harmony](#) or feedback.

Csikszentmihalyi (1998) lists components of an experience of flow that can be specifically enumerated:

1. *Clear goals* (expectations and rules are discernable).
2. *Concentrating and focusing*, a high degree of concentration on a limited field of attention (a person engaged in the activity will have the opportunity to focus and to delve deeply into it).
3. *A loss of the feeling of self-consciousness*, the merging of action and awareness.
4. *Distorted sense of time* - our subjective experience of time is altered.
5. Direct and immediate *feedback* (successes and failures in the course of the activity are apparent, so that behavior can be adjusted as needed).
6. *Balance between ability level and challenge* (the activity is neither too easy nor too difficult).
7. A sense of personal *control* over the situation or activity.
8. The activity is *intrinsically rewarding*, so there is an effortlessness of action.

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However, not all of these components are needed for flow to be experienced. Another important condition for getting into the flow is a non-disturbing environment. Every disturbance, such as a phone call, or a new person entering the room, will probably pull you out from flow experience back to reflecting mode. (Csikszentmihalyi 1998)

## Discussion

According to one viewpoint, creative and systematic methods differ mainly on means, how information is processed to achieve optimal results. Practice has indicated that the best results can be achieved in various ways. When the amount of processed and required information is huge and it is not possible to distinguish the necessary from the unnecessary, it is almost a necessity to rely on intuition and creative methods to get decisions made. This is because the amount of information may explode the decision-making system that may become uncontrollably large and slow. Correspondingly, with complete ideas or in analysing mature solutions, systematic thinking and logic are needed, in order to get innovations into business. When thinking about a single idea for the best possible final result it is not important whether the idea has been achieved creatively or systematically, but rather that the work is done by exploiting the best qualities of both approaches. How about the well-being at work, then?



There are management paradigms, for instance knowledge management, which have acknowledged an organisation's ability to be creative. Inside those approaches we can clearly see the role of individual thinking and the mindset of an individual worker. E.g. Nonaka and Takeuchi (1995) have noticed that a certain condition (Ba) is essential for success. This clearly refers to the ideas of Csikszentmihalyi (1998) presenting the ideal situation of "flow" for individuals to be effective and productive.

Well-being at work can be seen as a positive quality of life, where physical, mental, social and economic factors explain the relationship of the personnel and the organisation. Experienced well-being has an impact on the creation of the knowledge assets (skills and capabilities of personnel), which in proportion are connected focally to the results of the organisation. Connecting Csikszentmihalyi's (1998) "flow" to well-being at work means that people who "feel" well will evidently perform better than those who are burnt-out. However, being super-creative – i.e. being innovative, as required – also requires a "flow" –type mindset while working. Managing the well-being at work connects the personnel psychologically also to the vision and goals of the organization.

The connection between well-being in the work community and the profitability of the organization has increased organizations' willingness to invest on development projects. Organizations have been reorganized in order to gain better productivity and efficiency. Team work and networking have been acknowledged as key factors. Organizations simply cannot be successful if the work community is not "healthy". It is possible that experiences of well-being cannot be improved on an abstract level as mass production. This stream of thinking has started to, little by little, spread into the research of working life (e.g. Riikonen *et al.* 2002).

Knowledge and competence are increasingly regarded as the most critical resources of companies. Much of recent attention has focused, in particular, on the importance of "tacit knowledge" for sustaining a company's competitiveness, and its role in technological innovation and organisational learning. Tacit knowledge refers to knowledge that cannot be easily articulated or transferred because it is uncodified and context specific. Interest in tacit knowledge has also grown rapidly as studies of technological innovation and diffusion have increasingly identified tacit knowledge as an important component of the knowledge used in innovations. (Horvath 1999, Lam 1998)

What about the creativity in an organization, then? At first, yes, current development of management approaches drives the behaviour to rationality, which in practice means that organisations are managed like systems. In order to manage large organizations the managers and decision-makers need some indications from the real situation. These indications should be reliable, valid and as easy as possible to understand. For example Cross and Lynch (1991) and Kaplan and Norton (1996) have presented set metrics to support management. The operational processes have to be organized as a rational system to fulfill the needs of the measurement system. Otherwise the base for getting reliable information for metrics disappears.

Secondly, there is nothing wrong in the systematic approach if the existence of a creative mode can be maintained in an organisation. In fact at least some kind of system is needed in order to control the organisation. As mentioned earlier, an organism as a synonym to a system means that creativity can have room, and is truly considered within the system. However, when there is a system defined, man's natural drift is to rely on the system itself. This means that the real processes vanish to the background and the concept system is seen as a mechanism. This is very dangerous because the attention on an effort is in the mechanisms. This implication comes from the practice, where utilization of different methods has been an end in itself, even if a method used systematically, always generates some kind of a solution. If the system itself is not an end in itself, and it is understood to be in a supportive role, it creates favourable conditions for example for Nonaka's and Takeuchi's tacit knowledge to emerge.

As mentioned earlier, our purpose was to evoke wider discussion in order to create a more specific approach to analyse well-being at work, to measure and control creativity and other hidden resources in daily business and operations. It has to be kept in mind that knowledge as a resource of an organisation is not as vital in manufacturing organisations as it is in expert organisations. Therefore, this paper perhaps represents just one round in rotating the Deming wheel.

## References

- Bergström, M. 1984. Luovuus ja aivotoiminta. In: Haavikko R & Ruth J-E (eds) Luovuuden ulottuvuudet, 159-172. Weilin & Göös, Espoo.
- Bohm, D. and Peat, F.D. 1992. Science, Order and Creativity. Gaudeamus, Helsinki, 279 p.
- Buzan, T. 1983. Use Your Head. British Broadcasting Corporation, London, UK, 156 p.
- Cross, K. and Lynch, R. 1991. Measure Up! Yardsticks for Continuous Improvement, USA, Blackwell Publishers. 213 p.
- Csikszentmihalyi, M. 1998. Finding Flow: The Psychology of Engagement With Everyday Life. Basic Books.
- Csikszentmihalyi, M. 2005. Flow – elämän virta. Tutkimuksia onnesta, siitä kun kaikki sujuu. Helsinki: Rasalas Kustannus.
- Dale, H. B. 1994. Quality Control. Prentice Hall. United States of America. 501 p.
- De Bono, E. 1971. Lateral Thinking for Management. McGraw Hill Books, UK, 225 p.
- De Bono, E. 1990. Six Thinking Hats. Loimaan kirjapaino Oy, Loimaa, 162 p.
- Ferguson, E. S. 1977. The Mind's Eye: Nonverbal Thought in Technology. Science. Vol. 197, No. 4306. pp. 827 – 836.

- Ferguson, E. S. 1993. *Engineering and The Mind's Eye*. 2<sup>nd</sup> print. The MIT Press. 241 p.
- Gould, R. 2002. Suomalaisten työkyky – tuloksia Terveys 2000 –tutkimuksen tuloksista. *Kuntoutus* 2002:2, 16-26.
- Hakanen, J. 2002. Työn imu ja työuupumus. Laajennetun työhyvinvointimallin kehittäminen ja testaaminen. *Psykologia*, 37, 291-301.
- Harrington, H. J. 2000. *Project Change Management*. McGraw-Hill. 332p.
- Horvath, J. A. 1999. *Tacit Knowledge in Professional Practice: Researcher and Practitioner Perspectives*. Mahwah (N.J.). Lawrence Erlbaum 253 p.
- Härmä, M., Nupponen, T. (eds.). 2002. *Työn muutos ja hyvinvointi tietoyhteiskunnassa*. SITRA 22. Helsinki.
- Ilmarinen, J. 2003. Promotion of work ability during aging. In: *Aging and work*. Ed. by M Kumahiro et al. Taylor & Francis, London and New York 2003, 21-35.
- Kalimo, R. & Toppinen, S. 1997. *Työuupumus Suomen työikäisellä väestöllä*. Helsinki: Työterveyslaitos.
- Kaplan, R. S. and Norton, D. P. 1996. *The Balanced Scorecard: Translating Strategy into Action*, USA, Harvard Business School Press. 322 p.
- Karazek, R. A., & Theorell, T. 1990. *Healthy work: Stress, productivity, and the reconstruction of working life*. New York: Basic Books.
- Karjalainen, T. and Karjalainen, E. 2000. *Laatujohtamisen soveltaminen PK -yritykseen – SPC, systeemiteoria, TOC –teoria*. Quality Knowhow Karjalainen Oy. Lahti. 120 p.
- Katsaus 2000. *Tiedon ja osaamisen haasteet*. Valtion tiede- ja teknologianeuvosto. Helsinki 2000.
- Kinnunen, U., Feldt, T., Mauno, S. (eds.). 2005 *Työ leipälajina. Työhyvinvoinnin psykologiset perusteet*. Keuruu: Otavan kirjapaino Oy.
- Kolb, D. A. 1984. *Experimental Learning: Experience as the Source of Learning and Development*. Prentice-Hall: New Jersey. 256 p.
- Lam, A. 1998. *Tacit Knowledge, Organisational Learning and Innovation: A Societal Perspective*. University of Kent. Canterbury, Kent. Working Paper No. 98-22. 61 p.
- Malhotra, Y. 1997. *Knowledge Management in Inquiring Organizations*. Proc. of 3rd Americas Conference on Information System, Indianapolis, IN, August 15-17. pp. 293-295.
- Maslach, C. & Leiter, M.P. 1997. *The truth about burnout: How organizations cause personal stress and what to do about it*. San Francisco: Jossey-Bass.

- Maslach, C., Schaeferli, W. 2001. Job burnout. *Annual Review of Psychology*, 52, 397-422.
- Mäkitalo, J. 2001. Mitä on työhön liittyvä hyvinvointi? Teoksessa E.Paso (ed.). *Viimeinen tyky-kirja? Merikosken kuntoutus- ja tutkimuskeskus, Keskinäinen vakuutusyhtiö Tapiola*. Helsinki.
- Nonaka, I. and Takeuchi, H. 1995. *The Knowledge-Creating Company How Japanese Companies Create The Dynamics of Innovation*. New York. Oxford University Press. 284 pp.
- Oakland, J. S. 1995. *Total Quality Management; Text with Cases*. Butterworth Heinemann. Great Britain. 370 p.
- Ojanen, V., Kärkkäinen, H., Piippo, P. and Tuominen, M. 1999A. Selection of R&D Performance Measures from the Whole Company's Point of View. *Proc. of PICMET'99*. Portland, USA, July 25-29.
- Ojanen, V., Piippo, P. and Tuominen, M. 1999B. An Analysis of Product Development Performance Measures in Finnish High-Tech Manufacturing Companies. *Proc. Of 6<sup>th</sup> International Product Development Management*. Cambridge, UK, July 5-6.
- Ollila A. 1995. *Quality Improvements through ISO Standards*. ABB Oy. Helsinki. 145 p.
- Piirainen, H., Hirvonen, M., Elo, A-L. 2003. *Työ ja terveys –haastattelututkimus 2003*. Taulukkoraportti. Työterveyslaitos. Helsinki.
- Rantanen, J. 2004. *Työ ja työntekijät*. Teoksessa Kauppinen, T., Hanhela, R., Heikkilä, P., Lehtinen, S., Lindström, K., Toikkanen, J., Tossavainen, A. (toim.). *Työ ja terveys Suomessa 2003*. Työterveyslaitos. Helsinki.
- Rickhards, T. 1974. *Problem-solving through Creative Analysis*. Cower Press Ltd, Epping, Essex, UK, 198 p.
- Riikonen, Makkonen & Vilkkumaa. 2002. *Hullun työn tauti. Vastapaino*. Jyväskylä.
- Savidge J. 1994. *The Pathmaster Guidebook – New Resources Mentors, Coaches, Guru's & Angels*. The Finnish Academies of Technology. Helsinki. 86 p.
- Savolainen, T., Saaren-Seppälä, K. and Savolainen, S. 1999. Liiketoimintaprosessien luova virtaviivaistaminen. *Metalliteollisuuden keskusliitto, MET, Tampere Julkaisuja 4*: 199 p.
- Schaeferli, W., Leiter, M.P., 1996. The MBI-General Survey. Teoksessa C.Maslach, S. E. Jackson ja M. P. Leiter (toim.), *Maslach Burnout Inventory Manual (3rd ed.)* (s.19-26). Palo Alto: Consulting Psychologists Press.
- Tuomaala, J. 1999. *Creative Engineering Design*. Acta Universitatis Ouluensis C128: 170 p.
- Tuomi, K., Ilmarinen, J., 1992. *Työkykyindeksi*. Helsinki: Työterveyslaitos.

Eila Lindfors

## **Technology Education - is it available equally for girls and boys in the future?**

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### **Abstract**

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Finnish dissertations present different perspectives on today's technology education and its future. The new 2004 Curriculum for comprehensive school offers different opportunities to organise teaching. This paper tries to promote discussion on the development of technology education from the perspectives of the dissertations. The main question is: *What opportunities are there using the perspective of Finnish dissertations to implement technology education in general education?* The discussion is focused mainly on the concept and the content of technology and technology education and the equality of the sexes. In the Finnish tradition it is especially a question of how it might be possible for both sexes to gain a broad and creative technology education in the future.

### **Background and some remarks**

A world-wide scientific concept of technology education (TE) in general education usually refers to innovative problem solving related to the environment's systems and products. Technology education in this sense can be seen as a way to consider the future creatively. Technology or technology education is a school subject in many western countries but not in Finland, where it is more or less bound to craft and design, as in the other Nordic countries. Much international research actually points out (see e.g. Hansen 2002; Thomson 2002) that technology education was started in Finland in the 1860's by Cygnaeus. Technology education has been raised as a topic of international discussion and research especially in the end of the 1990's and the beginning of the new century (see e.g. Benson 2002; Dugger 1997; Hansen 2002; LaPorte 2002). In Finland, Kananoja began the discussion about modern technology education in the 1980's (see e.g. Kananoja 1989).

Technology education has different features in various societies, and they depend very much on what kind of and how long a tradition there is in implementing it. De Vries (1997, 30-31) has compared international variations and found eight different types from craft-oriented to science, technology and society approaches. There are no global solutions, even though there is a common acceptance of many features. The differences are in relation to e.g. actual work, industry, science and craft. Nevertheless, it seems to be very clear that all kinds of societies have some interest in developing technology education (see Fontoura & Pereira 2001; Horn 2001).

The future of technology education is under evaluation in Finland. In educational settings the literature points out that technology education has been implemented mainly in craft and design, and especially in technical work (e.g. Alamäki 1999; Autio 1997; Kananoja 1994; Kankare 1997). The curriculum for comprehensive school from 1970 (POPS II) states, and the 1994 curriculum for comprehensive school more precisely insists that all students, girls and boys, should have an opportunity to learn craft and design in both textile work and technical work. In practice, the teaching has usually been organised in such a way that in the first two school years the pupils learn craft and design together. In the third grade they study half of the year both textile and technical work. In most schools, *either* textiles *or* technical work begins on the fourth grade and choices made by students are very traditional. The new 2004 curriculum which will be implemented in 2006 at the latest insists that craft and design have to be a common subject for both sexes during grades 1-4. After that, it will be possible to choose which one students study mostly. The new curriculum includes also a multidisciplinary common theme *People and Technology*. Practice and research show that boys choose mainly technical work and girls mainly textile work (Autio 1997). Traditionally technical work is taught by male and textile work by female teachers, though there are some females in technical work area also. Luomalahti (2005) points that student teachers' general images of technology reflect their subjective values and priorities. Common stereotypes in this area seem to be evident and this raises questions for the future of technology education at school.

When discussing and designing the future of technology education in the context of a country where it is bound more or less to textile and technical work, the concern is whether girls and boys have an opportunity to learn technology equally (see Lindfors 2002a; 2002b). Having dissertations as research material, the interesting question is also whose ideas form the research results. Who are the authors and whose answers and action make up the research material? In other words who define the future of technology education?



## Research problems, data and method

On the basis of the curricula, the system of teaching and the choices made by students, we can ask whether technology education will be equally available for girls and boys in the future. There is a need to look at the future of technology education using the perspective of previous research to discuss possibilities of developing the area.

The main question of this paper is:

*What opportunities are there using the perspective of Finnish dissertations to implement technology education in general education?*

The answer to the main question is found out by answering some further questions:

1. What kinds of dissertations have been written on technology education in Finland?
2. How are the concepts of technology and technology education understood?
3. What is seen as the role of technology education, and what are its goals?
4. How do the dissertations address the issue of gender equality in technology education.

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The paper is based on nine dissertations (table 1) published between 1997 and 2003. The dissertations have been chosen on the basis of the key word *technology education*. These dissertations are published just before and just after the year 2000. In that sense they can be seen like guidelines for the future: for the new 2004 curriculum and/or for theoretical guidelines for implementing technology education in practice. These dissertations are also the first ones concerning technology education in Finland since Kananoja 1989. They can be seen as promoters of the development of technology education in Finland.

The approach is qualitative. The dissertations are studied and analysed systematically on the basis of content analysis, which is seen in this paper as a research technique for making repeatable and valid inferences from texts (see Krippendorff 2004, 18). Dissertations represent a scientific text type which can be assumed to be understandable in a scientific context. The research questions act as guideline for the analysis and inferences made by the researcher. The text and sentences which clarify the answers to the research questions are seen as data units. To be able to analyze and make comparisons between different dissertations, the data units are presented in tables. The dissertations are presented in the tables in alphabetic order of authors to facilitate following the source of a specific data unit. This should help also in the evaluation of inferences and results made by the researcher.

## Results

### **What kind of dissertations have been written on technology education in Finland?**

Just before and after year 2000 there seem to be nine dissertations concerning technology education (Table 1). Some of them have a background in craft and design education (Autio 1997; Kankare 1997; Metsärinne 2003). The larger part has technology education as the focus in the frame of reference (Alamäki 1999; Heinonen 2003; Järvinen 2001; Kantola 1997; Parikka 1998; Rasinen 2000).

A societal perspective is seen in the dissertations by Kankare (1997), Kantola (1997), Parikka (1998) and Rasinen (2000). The research task of these dissertations (table 1) is on the concept and curriculum level. The authors seek to clarify, examine, define and evaluate the concepts of technology and technology education, as well as to try to establish, define and develop elements for technology education curricula. In the frame of reference, the authors examine concepts from different perspectives like culture, society, history, natural sciences, environment, the school context and craft. The data consists of different kinds of documents and empirical questionnaires which have been answered by experts from various walks of life. Conclusions are made concerning technology education both in general education and in teacher education.

**Table 1.** Descriptions of the dissertations used as data in this study:

dissertation, research task, frame of reference, data and results. *The abbreviation TE is used for technology education.*

Dissertation	Research task	Frame of reference	Data	Results
Alamäki, Ari (1999) <b>How to educate students for a technological future: Technology education in early childhood and primary education.</b>	-To deepen the understanding of the pedagogical approach to TE -To investigate practices and the possibilities of promoting them in TE in early childhood and primary education	The concept of technology and technology education, learning and teaching in TE	-two theoretical studies -two empirical survey studies: N=192 in early childhood education (6 males 186 females) and N=212 in primary education (205 males, 7 females)	- The focus in TE are the cognitive and affective processes which the activities induce. -The generative processes that combine both abstract thinking and concrete doing form the core of TE. -Boys in particular have a need for activities of TE in early childhood education. -TE should have more resources and include more modern technological content.
Autio, Ossi, (1997) <b>Student's development in technical abilities in Finnish comprehensive school. Boys and girls in an experiment of shared craft education. (In Finnish)</b>	- To study handicraft teaching empirically and theoretically from the technical abilities point of view and - to try to find models for organizing textile work, technical work and technology education in best possible ways.	Handicraft teaching, technical abilities, meaningful learning, work as action, teaching and learning of skills	Experiment research with 5-9 grades students, N=267 (161 males, 106 females): before-after experiment with progress measures 1)Psychomotor assemble test 2)Cognitive picture test 3)Attitude questionnaire all in groups of textile work and technical work and in groups of shared craft education.	-The psychomotor area of technical abilities improves quite considerably even with a small amount of practice while the cognitive development takes longer. -There are differences in the affective and cognitive areas between sexes. -Every student must be given the basic skills required in everyday life situations but also a possibility to concentrate on the area of crafts they are interested in.
Heinonen, Asko (2003) <b>Self-directed and inquiring studying in technology education. Design Research in technology education in class teacher education. (In Finnish)</b>	To find out how to organise a course in technology that would support the student learning process concerning the subject matter and provide good knowledge on the didactics and teaching of handicrafts / technical work in elementary school.	Learning as a self-directed and inquiring process, collaborative learning, tutoring the learning process, know-how, technology education, technical work	Development research: 2 case studies in a course of handicrafts / technology included in the elementary school teacher education program: 1) self-directed learning of subject contents, N=12 (6 males, 6 females) 2) inquiry learning in teaching practice, N=11 (5 males, 6 females)	- Self-directed and inquiry study work well in carrying out student-centered content studies and group-based teaching practice and therefore it is possible to apply them in the planning of technology courses. -Teachers' substance know-how, didactic skills and attitudes, as well as emotions are the starting points of technology education.
Järvinen, Esa-Matti (2001) <b>Education about and through technology. In search of more appropriate pedagogical approaches to technology education.</b>	- How to develop more appropriate pedagogical approaches to TE -To deepen understanding about the nature of technology and its possible correspondence to the constructivist notion of learning.	The nature of technology, constructivism, socio-cultural learning milieu, problem solving	-2 theoretical studies -2 case studies in natural educational settings: 1) automation technology and teaching it: 90 pupils (45 girls, 45 boys) 2) children's thinking and actions in small group social interaction and on an individual level while creating a sound using product	-social interaction can be interpreted to promote technological problem solving and learning -an ownership and emotional engagement over the task is bound to problems in the pupils life - it is important to work and learn in a way that fosters open problem solving with innovation and divergent thinking

Author	Research task	Frame of reference	Data	Conclusions
Kankare, Pasi (1998) <b>The contexts of technology education (technical work) in schools. (In Finnish)</b>	-theoretical evaluation of the concept 'technological literacy' -definition of technology in Finnish schools -the contexts of learning technological literacy in comprehensive school	-technology and the school context -elements of technological literacy -Learning in a technological environment -technical work	-theoretical study of technological literacy -quantitative questionnaire for 800 technical work teachers -response rate 40 %. N= 326, probably all men	-technical work is almost the only subject where the development of technological literacy is possible -technological literacy is one of the main goals of technical work - the context of teaching technological literacy depends of the length of the teacher's experience and the geographical location of a municipality
Kantola, Jouko (1997) <b>In the footsteps of Cygnaeus: From handicraft teaching to technological education. (In Finnish)</b>	To examine the development that has taken place in the teaching of handicraft in Finland from 1863 up to 1990's.	-Handicraft, technology and sustainable development -values and integration of teaching handicraft, technology and environmental studies	History research -essays, interviews, diaries - questionnaires: 1)the realization of curricula in teacher education department N=10, all males , 2) environmental education and attitudes and awareness of environmental matters N= 10, all males	-there are evident needs for gearing the handicraft teaching more closely to TE -teacher education should include TE encompassing the principle of sustainable development - need for integrated technological-environmental curriculum for teacher education
Metsärinne, Mika (2003) <b>Sloyd vision teaching and learning. Case and action research in 9th classes. (In Finnish)</b>	To provide means to create a model for vision teaching enabling the implementation of different teaching solutions for different teaching phases.	Sloyd vision teaching with target oriented vision learning.	- action and case study -writing, questionnaires, tests, products - secondary school technical work students (N=48), probably mostly boys	-students were more interested in technological action than in adapting it to manufacture a product -teaching should not be based on traditional product planning or the equipment -technology teaching should be part of the overall making process
Parikka, Matti (1998) <b>Technological competence; Challenges of reforming technology education in the Finnish comprehensive and upper secondary school. (In Finnish)</b>	To clarify the meaning of technology, technological literacy, and technology education as an object of comprehensive and upper secondary schools.	-Technical work as starting point of TE, -technology, technological competence, technology education	Concept analysis of technology and technological literacy especially in comprehensive school, upper secondary school and teacher education Conclusion oriented research, one-round delphi: questionnaire: N=32 (28 males, 4 females)	-the concept of technology in general education or technological literacy consists of technological systems, innovation processes and the effects of technology -technological competence consists of the conceptual and functional levels - TE should have a conceptual and functional component
Rasinen, Aki (2000) <b>Developing Technology Education. In Search of Curriculum Elements for Finnish General Education Schools.</b>	-study the concepts of technology and technology education -seek curriculum elements for development of TE in Finnish general education	-concept of technology -theory of curriculum -6 western curricula	- concept analysis - Questionnaire based on the analysis of 6 different national TE curricula (N=42)	-technology should be part of general education for all students from kindergarten to upper secondary school -findings can serve as a platform while developing TE curriculum

Dissertations on didactics like those of Alamäki (1999), Autio (1997), Heinonen (2003), Järvinen (2001) and Metsärinne (2003) focus on teaching and learning technology. The research tasks (table 1) are related to both general and teacher education: How to promote and develop more appropriate approaches to technology education or to technology in craft education. The frames of reference in these dissertations deal with teaching, and especially learning and defining concepts included in technology education. Three of the five are case studies and in two studies the data is from samples of 267 to 326. Conclusions are made concerning the nature of technology teaching and learning.

### **What is understood by the concepts of technology and technology education?**

On the basis of definitions of the concepts of technology and technology education it seems that there are two different perspectives, societal and school context. Definitions are meant to be open or more precise according to the authors (table 2). A common level definition of technology made by Alamäki, Kantola, Järvinen, Rasinen and Parikka includes action or process and knowledge or understanding. Parikka and Rasinen point out making or implementing innovation. Alamäki and Järvinen include human needs and wants as a basis of technology. Autio, Heinonen, Kankare and Metsärinne define technology in the school context connected to the subject technical work. Technology is seen either as an integrative phenomenon, as equivalent to technical work, or as the means and knowledge to produce in the context of technical work.

The content of the definitions of technology education vary widely from each other. The authors include (table 2) multidisciplinary, knowledge and process, self-directiveness, inquiry, technological literacy, ethics, sustainability and future-orientation in the definition. There is no exact common knowledge or definition about technology education. Alamäki, Parikka and Rasinen present broader and more open definitions than the others.

**Table 2.** The definitions of technology and technology education, the goal and the role of technology education in general education.

	<b>Technology</b>	<b>Technology education</b>	<b>The goal of Technology education:</b>	<b>The role of Technology education:</b>
Alamäki 1999	Technology is the knowledge and human process for designing, producing and using products and systems. It is both a means and human activity beginning with needs or wants ending with a product or a system.	TE is the hands-on based educational field focusing on technological knowledge and generative human processes needed in designing, producing and using products and systems.	To educate technologically literate citizens who are able to cope with the technological world now and in the future.	To be a subject (technical work is seen to be equivalent to TE) which educates knowledgeable, capable, active, critical, equal and balanced citizens.
Autio 1997	Technology at school: information, communication and production technology	TE is a multidisciplinary phenomenon which integrates various subjects at school.	To understand the nature of technology, its structures and functions and to learn to use it.	TE is a part of craft and design (technical work) but at the same time can be integrated to many subjects.
Heino- nen 2003	Technology is a school subject (technical work)	TE is a self-directive and inquiry based subject for developing know-how in technology.	To develop the student's technological thinking, problem solving skills, application of know-how and self evaluation skills.	Teacher students should put TE into practice in technical work.
Järvinen 2002	Technology is a human-made environment built on the basis of our needs, wants and purposes.	A multidisciplinary approach to teaching technology.	Education about and through technology: to increase knowledge and to make children to do it.	A multidisciplinary approach or a new subject called technology. Technical work is a narrow framework for TE.
Kankare 1997	Technology is an integrative phenomenon which broadens comprehensive school technical work to a broadly based syllabus.	TE is technological literacy taught in the context of technical work.	To give technological literacy to students.	Technological literacy can be taught as one of the main goals of technical work
Kantola 1997	To technology belong technique, materials and the use of energy, understanding of the production process and caring for society.	TE is all the technical education that a person can get in a lifetime.	Technological literacy as a part of our culture in the past, present and future.	Technical work is a part of a broader TE.
Metsä- Rinne 2003	In Sloyd technology is the knowledge and means resource for the vision of producing possibilities	TE is a part of Sloyd (technical work) vision teaching and learning	The student understands the significance of trying and doing technology.	To define technical problems or tasks in visual learning of technical work.
Parikka 1998	The concept of technology consists of technological systems, innovation process, and the effects of technology.	TE is future oriented aiming to be able to make ethical choices between technology products, to use them resourcefully and to develop more useful and sustainable technological applications.	Technological competence with conceptual and functional levels.	TE can be seen as: 1) an independent subject 2) strong integration between different subjects 3) flexible integration with projects
Rasinen 2000	Technology can be seen as interaction between human beings and nature and as implementation of human innovations.	TE is future-oriented education with the targets to make ethically durable choices of technological commodities, use them ingeniously and more feasible and make more environmentally friendly solutions	Students should achieve an ability to utilize, control and understand technology.	Technology should be a subject in general education from pre-school to university level.



## **What is seen as the role of technology education, and what are its goals?**

The dissertations share a concern over the role of technology education in general education. By role is meant here the way technology education should be organised at school. There seem to be five different possibilities (table 2). The researchers Alamäki 1999, Järvinen 2001, Kantola 1997 and Parikka 1998 define technology education as an umbrella concept for craft and design. Parikka (1998) presents three alternatives: technology education as an independent subject, technology education as integrative umbrella for different subjects or technology education as something to be flexible integrated with projects. Five authors of the nine view that technology education is put into practice in technical work. Some even say that technology education is equivalent to technical work. Järvinen (2001) prefers multidisciplinary integration or independent subject. Järvinen (2001), along with Kantola (1997), views technology education as a broader concept than just technical work. Räsänen (2000) insists that technology education should be a subject in general education from pre-school to higher education.

Considering the goal of technology education, it seems that there is some common understanding, even though the terms differ (table 2). Each author stresses the knowledge of technology and the hands-on aspect of technology education. The concepts of technological literacy and competence are mentioned. We could sum up by saying that in the view of the dissertations the goal of technology education is to help the students to achieve such a knowledge and understanding of technology that they can operate in their environment and develop it by critically solving the problems arising.

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## **How do the dissertations address the issue of gender equality in technology education.**

The issue of gender equality concerns the question whether girls and boys have an opportunity to learn technology equally and whose ideas form the research results.

### **Gender equality**

Considering how technology teaching is organised at comprehensive school it is important to establish an idea of what kind of content is seen as application areas. Technology itself is defined broadly in most of the dissertations (table 2). When the writers specify the contents of technology they give examples of sectors of society and systems. Parikka (1998) and Räsänen (2000) for example agree that technological systems in society include information technology, health care technology, administration, building and construction, industry and industrial life, agriculture and forestry and the effects are cultural, societal, and environmental. The list of the contents is long: mechanics, mechanical

devices, machinery, structures, pneumatics and hydraulics, electricity and electronics, computers, programmable logic, automation, materials processing and metal, wood, plastic as materials according to the suggestions by Alamäki (1999), Järvinen (2001), and Rasinen (2000).

Textile work, which girls learn mostly, is not on the list. It is even mentioned that there is not much technology in textile work (Alamäki 1999; Kankare 1997; Kantola 1997) or the teachers do not share the idea of technology education (see Rasinen 1998). At the same time, there are remarks about technology in textile lessons (see Järvinen 2001) while *girls design and make mostly clothes and other useful products*. There is a potential for real technological activities, in which the students' thinking skills and technological problem solving processes are fostered as efficiently as in technical work (Järvinen 2001).

Technological processes seem to overlap through different materials. Rasinen (2000, 125) looks at content through the subjects and sees that technology is studied in technical work but also in connection with many other subjects like information technology, mathematics, science, textile work, home economics, history and social studies. A multidisciplinary approach sees textiles as one application area (see Alamäki 1999; Rasinen 2000).

Most authors consider technology education to be problematic from the girls' point of view in the traditional systems of craft and design teaching. If girls do not study technical work it is considered that they cannot receive technology education (see e.g. Rasinen 2000, 127-128). Technology education has an important role in correcting and instilling technological equality between boys and girls. The future challenge in planning curricula and instruction is to find a suitable balance between different subject areas. (Alamäki 1999.)

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### Whose ideas do the dissertations present?

The first observation in evaluating whose ideas the dissertations present is that all the authors are men (table 1). There are no women who have written a dissertation concerning technology education in Finland. The second observation is that all the authors have a background somehow connected to technical work and they use it as an example while presenting ideas of how technology education is put to practice (table 2).

When looking the table 1 and the data column one can get some idea about who has provided the research material. In three studies out of nine, there is no information on the sex of the respondents but according the tradition of teaching at school one can assume that the respondents are boys and/or men. In two studies the respondents are mentioned to be men. In four dissertations out of the nine there is a rough balance between sexes.

## **Technology education – an opportunity to the creative future?**

While trying to answer the question – *What opportunities are there using the perspective of Finnish dissertations to implement technology education in general education?* – the material has been nine Finnish dissertations (table 1). This short presentation discusses the topic on quite a general level. It is neither simple nor easy to put different dissertations on the same starting line and try to understand the concepts and results together. Misconceptions and incorrect evaluations are always possible. On the basis of the information presented in the tables and texts this paper tries to answer the question of the future of technology education from Finnish perspective.

The definitions of technology (table 2) can be put together and seen as innovative knowledge and action in order to solve human needs and wants by producing sustainable solutions. Technology education in general education can be seen as innovative use of knowledge and practical action in order to solve human needs and wants by producing sustainable solutions in a pedagogical context. The goal of technology education is to get the students to achieve such knowledge and understanding of technology that they can operate in their environment and develop it by critically solving the problems arising.

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All of these things seem to be very reasonable and open for every student at school. So far we could say that one prospect of a creative future can be found through technology education. Equality problems become evident when we look at the role of technology education in general education in the context of craft and design. Five dissertations see technology to be more or less bound to technical work. As the curriculum divides the substance of the subject into two parts and the system of teaching will allow students to choose between them also in future, it is no longer self-evident that every student will receive a technology education covering a wide area of products and systems in one's environment. In this case creative future through technology education is not evidently available for all.

It can be said that in practice craft and design teaching effectively separates boys and girls. The current research indicates that technology education implemented in technical work has been available mostly for boys and not girls. It would be interesting to know what the research would say if there were females as researchers and applications reported also on the textile side. There are no questions raised about whether the boys are given a broad enough technology education. This goes against the idea of technology education, the meaning of curricula and the principles of gender equality.

While drawing conclusions we have to be aware that there are some comments on the relevance of technology education in textile work (Lindfors 2002a; 2002b) but no research concerning the situation, nor is there research which would compare technology education in textile and technical work. Depending on the pedagogical solutions and teachers' images and ideas about technology, textile work can be a great contributor to technology education. An important question is who will have the opportunity to learn about it.

Five dissertations present different ideas on how to apply technology education more broadly than in merely the context of technical work. It seems to be quite clear that the content and the way of organise teaching today effects dramatically the equality of technology teaching to boys and girls. If the actual integration between different subjects were to happen, we can assume there would be a broader content to technology education taught by male and female teachers. If the new curriculum (2004) and the theme *People and Technology* are put into practice a new multidisciplinary tradition of technology education in general education will probably begin. There is also a need for multidisciplinary research and ideas of female and male researchers should contribute to technology education. The research available today is made by men and there is lack of female teacher perspective.

If the traditions of organising teaching and dividing work between genders go on, we can assume that only some girls will receive a broad technology education or that the content for all students will remain narrow. This means that traditional technology in the lives of women, like textiles, cooking, nursery and laundry will not be present in technology education. We have a long way to go to improve everyday technology equally. As a mother of three daughters and three sons I can support the idea of Rasinen (2000, 7) that technology should not be developed by young, healthy and unmarried men. Technology should be developed innovatively on the basis of problems in life. This is hopefully possible if both genders work together improving technology and technology education. This is an essential precondition for each student to have an opportunity to receive a broad and equal technology education in general education. If this will happen technology education can be one opportunity to consider the future creatively.

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## References

- 2004 Curriculum. National Core Curriculum for Basic Education 2004 [http://www.oph.fi/info/ops/pops\\_englanti\\_index/index.pdf](http://www.oph.fi/info/ops/pops_englanti_index/index.pdf), 10.03.2005
- 1994 Curriculum. Peruskoulun opetussuunnitelman perusteet 1994. Opetushallitus. Helsinki: Painatuskeskus.
- Alamäki, A. 1999. How to Educate Students for a Technological Future: Technology Education in Early Childhood and Primary Education. *Annales Universitatis Turkuensis. Ser. B. – TOM.* 233.
- Autio, O. 1997. Student's development in technical abilities in Finnish comprehensive school. Boys and girls in an experiment of shared craft education. *Helsingin yliopiston opettajankoulutuslaitos. Tutkimuksia* 177. Published in Finnish.
- Benson, C. (2002) Primary Design and Technology in England-Development and Practice. In E.-M. Järvinen, M. Lindh, E. Sääskilähti & J. Twyford (eds.) *Technology education in practice. Oulun yliopiston kasvatustieteiden tiedekunnan selosteita ja katsauksia* 4/2002, 88-96.

- Dugger, W. jr. (1997) Technology for all. In T. Kananoja (eds.) Seminars on technology education. Oulun yliopiston kasvatustieteiden tiedekunnan opetusmonisteita ja selosteita. 69/1997, 35-40.
- Fontoura, A.M. & Pereira, A.T.C. (2001) Why we still don't have design and technology in our primary schools. In C. Benson, M. Martin & W. Till (eds.) Third International Primary Design and Technology Conference. Quality of Making. Faculty of Education. University of Central England, Birmingham, 67-69.
- Hansen, R. (2002) Technological Education Policy and Practice. Assumptions which need clarification. In E.-M. Järvinen, M. Lindh, E. Sääskilahti & J. Twyford (eds.) Technology education in practice. Oulun yliopiston kasvatustieteiden tiedekunnan selosteita ja katsauksia 4/2002, 33-45.
- Heinonen, A. (2002) Self-directed and inquiring studying in technology education. Design Research in technology education in class teacher education. University of Joensuu. Publications in education. N:o 79. Published in Finnish.
- Horn, L. (2001) A comparative study on the implementation of technology education by ORT-STEP in Cape Metropolitan area. In C. Benson, M. Martin & W. Till (eds.) Third International Primary Design and Technology Conference. Quality of Making. Faculty of Education. University of Central England, Birmingham, 87-89.
- Järvinen, E.-M. (2001) Education about and through technology. In search of more appropriate pedagogical approaches to technology education. Faculty of education. University of Oulu. Acta universitatis Ouluensis. E Scientiae Rerum Socialium 50.
- Kankare, P. (1997) The contexts of technology education (technical work) in schools. Annales universitatis Turkuensis. Serie C. Part 139. Published in Finnish.
- Kananoja, T. (1994) Teknologian ja sen opetuksen historiaa ja kehitystä. Oulun yliopiston kasvatustieteiden tiedekunnan opetusmonisteita ja selosteita. 56/1994.
- Kananoja, T. (1989) Työ, taito ja teknologia: Yleissivistävän koulun toiminnallisuuteen ja työhön kasvattamisesta. Turun yliopiston kasvatustieteen julkaisusarja, n:o 72.
- Kantola, J. 1997. In the footsteps of Cygnaeus: From handicraft teaching to technological education. Jyväskylä university. Jyväskylä studies in education, psychology and social research. 133. Published in Finnish. English summary.
- Krippendorff, K. (2004) Content analysis. An introduction to its Methodology. London: Sage Publications.
- LaPorte, J. (2002) Technology education in the United States: A Critical Analysis of the Change Process. In E.-M. Järvinen, M. Lindh, E. Sääskilahti & J. Twyford (eds.) Technology education in practice. Oulun yliopiston kasvatustieteiden tiedekunnan selosteita ja katsauksia 4/2002, 46-51.

- Lindfors, E. 2002a. Tekstiilituotteen teknologiset ominaisuudet. Joensuun yliopisto. Kasvatustieteellisiä julkaisuja n:o 77.
- Lindfors, E. 2002b. Textiles and Technology Education. Teoksessa J. Kantola (toim.) Looking at the future: technical work in the context of technology education. University of Jyväskylä. Department of Teacher Education. Research 76, 119-128.
- Luomalahti, M. 2005. Naisopiskelijoiden teknologiasuuntautuminen luokanopettajakoulutuksessa. Acta Universitatis Tamperensis 1065. Tampere: Tampereen yliopistopaino.
- Metsärinne, M. (2003) Sloyd vision teaching and learning. Case and action research on the 9 th classes. Annales universitatis Turkuensis. Ser. C – Tom 198. Published in Finnish. English summary.
- Parikka, M. (1998) Technological competence; Challenges of reforming technology education in the Finnish comprehensive and upper secondary school. University of Jyväskylä. Jyväskylä studies in education and social research. 141. In Finnish. English summary.
- POPS II. Peruskoulun opetussuunnitelmakomitean mietintö II. Komiteamietintö 1970 A 4. Helsinki: Valtion painatuskeskus.
- Rasinen, A. (2000) Developing Technology Education. In Search of Curriculum Elements for Finnish General Education Schools. University of Jyväskylä. Jyväskylä studies in education and social research. 171.
- Thomson, C. J. (2002). What is Unique about Primary Technology Education? A Scottish Model. In E.-M. Järvinen, M. Lindh, E. Säaskilahti & J. Twyford (eds.) Technology education in practice. Oulun yliopiston kasvatustieteiden tiedekunnan selosteita ja katsauksia 4/2002, 113-119.
- Vries, M.J. de (1997) Technology education in the Netherlands: trends and issues. In T. Kananoja (eds.) Seminars on technology education. Oulun yliopiston kasvatustieteiden tiedekunnan opetusmonisteita ja selosteita. 69/1997, 21-34.



Marketta Luutonen

## **Käsityömuotoilu koulutuksen, tutkimuksen ja työelämän edistäjänä**

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Pohdin käsityömuotoilun ja teknologian maisterikoulutusohjelman lähtökohtia ja kehitystavoitteita. Maisterikoulutusohjelman taustalla oli tarve luoda Itä-Suomeen käsi- ja taideteollisuusalan opettajille ja muille alan toimijoille mahdollisuus pätevoitymiseen ja osaamisen syventämiseen. Tavoitteena on koulutuksen keinoin vahvistaa alueen osaamista ja yritystoimintaa. Opiskelijoilta edellytettiin muotoilualan ammattikorkeakoulututkinto. Tutkintoaine on käsityötiede ja koulutus johtaa ylempään korkeakoulututkintoon. Koulutusohjelma aloitettiin kesällä 2005 Joensuun yliopiston Savonlinnan opettajankoulutuslaitoksessa ja siihen valittiin pääsykokeilla 27 opiskelijaa. Opiskelijat ovat aikuisia miehiä ja naisia, jotka toimivat käsi- ja taideteollisuusalan tehtävissä esimerkiksi opettajina. He edustavat koko käsityöalaa ja koulutuksessa ylitetään materiaalin ja teknologian rajat. Maisterikoulutusohjelmalla on Euroopan sosiaalirahaston osittainen rahoitus, mutta opetusministeriö on vakinaistanut ohjelman. Koulutus jatkuu lokakuun 2007 loppuun. Koulutustarve ja yliopiston päätökset ratkaisevat mahdolliset uudet sisäännotot. (ESR -projektihakemus ja -päätos, valintaperiaatteet 2004.)

Koulutusohjelma tarjoaa lähinnä pääaineopinnot ja jonkin verran muita opintoja. Sivuaineeksi on tarjottu tieto- ja viestintäteknikka, jonka osa opiskelijoista onkin valinnut. Opiskelijoista valtaosa on työelämässä ja opiskelee vapaa-aikanaan. Koulutus toteutetaan Kuopiossa, Joensuussa ja Savonlinnassa. Kontaktiopetuksen lisäksi käytetään melko paljon verkko-opintoja ja omaehtoista opiskelua. Opintoihin liittyy pienimuotoisia projekteja ja esseiden kirjoitusta. Tutkielma- ja metodiopintojen ja kirjallisuuden lisäksi opintokokonaisuuksia ovat asiantuntemus ja luovuus, käsityö ja hyvinvointi sekä käsityömuotoilu ja projektityö. Opiskelijoille avataan tutkimuksen tarjoamia keinoja löytää uusia näkökulmia ja toimintatapoja. Yhtenä sisällöllisenä painoituksena on käsityö ja hyvinvointi, joka nähdään laajasti sosiaalisena, psyykkisenä, fyysisenä ja aineellisenä hyvinvointina. (Käsityömuotoilun ja teknologian maisterikoulutusohjelma 2005, opetussuunnitelma.)

Käytän esityksessäni aloitus- ja rahoituspäätöksen taustalla olevia asiakirjoja, syyskuussa 2006 opiskelijoille tehtyä kyselyä, keskusteluja opiskelijoiden kanssa sekä omia kokemuksiani maisterikoulutusohjelman tutkimusjohtajana sekä muuta käsi- ja taideteollisuusalan tuntemustani. Tarkastelen samalla koulutuksen suhdetta Kauppa- ja teollisuusministeriön valmistelemaan käsityöalan yritystoiminnan kehittämisstrategiaan 2006–2013.

Ensimmäiset havainnot osoittavat, että käsityömuotoilun kysymysten syvälinen ja teoreettinen käsittely toimii luontevasti ryhmässä, jossa opiskelijoiden tausta ja edustama käsityöala ovat hyvin erilaisia. Tämä viittaa siihen, että samalla kun käsityö on kiinnittynyt vankasti tekemisen taitoon ja materiaalin hallintaan, sen ydin ylittää nämä asiat. Keskustelut ja opiskelijoiden tekstit osoittavat kuinka alan ammatillinen osaaminen ja teoreettinen tarkastelu nivoutuvat hienolla tavalla yhteen.

Koulutus on meneillään ja vielä on aikaista osoittaa sen vaikutuksia työelämään, mutta näyttäisi siltä, että opiskelijoiden valmiudet kehittyvät ja heille avautuu uusia näkymiä omaan alaansa ja sen mahdollisuuksiin. Opiskelijoiden aiemman ammatillisen koulutuksen melko selkeä sisältö ja sen tarjoamat ammatilliset väylät on ikään kuin hämärretty ja opiskelijat on johdatettu epävarmaan monia vaihtoehtoja sisältävään tulevaisuuteen. Koulutus ei sinänsä ota kantaa opiskelijoiden ammatillisiin ratkaisuihin.

## Käsityötiede

Käsityötieteen juuret ovat käsityönopeettajan koulutuksessa, joka alkoi Helsingissä vuonna 1886. Vuonna 1989 Helsingin yliopiston tekstiiliopin ensimmäiseksi vakinaiseksi viranhaltijaksi nimitetty Pirkko Anttila kehitti tieteenalalle teoreettiset lähtökohdat ja käsitteistön. Tarkastelun ytimessä olivat tuotteiden suunnittelu- ja valmistusprosessit, tuotteiden käyttö sekä ympäristö, jossa toiminta tapahtuu tai johon se vaikuttaa. (Luutonen et. al. 1999.)

Savonlinnan opettajankoulutuslaitoksessa käsityönopeettajien koulutuksen pääaineena on käsityötiede. Tutkimusalana on käsityö, käsityömuotoilu ja esineellisen kulttuurin vuorovaikutus ympäristöön sekä käsityöhön liittyvien ilmiöiden ja toiminnan teoreettisten perusteiden analysointi. Käsityöllinen toiminta on toimivan ihmisen ja toiminnan kohteen, visuaalis-esineellisen ympäristön, välistä vuorovaikutusta. Käsityötiede tutkii tuotteiden suunnittelu- ja valmistusprosesseja, prosessien aineellisia ja aineettomia tuotoksia, tuotteiden ja kulttuurin suhdetta sekä ihmistä materiaalsen maailman tuottajana ja kokijana. Käsityön tutkimuksen kohteena olevat ilmiöt liittyvät suunnittelijan, toteuttajan tai käyttäjän todellisuuteen.

Käsityötieteen paradigma asettuu tieteen, taiteen ja teknologian leikkauspisteeseen. Käsityötiede voidaan nähdä sateenvarjona, jonka alle kehitetään muotoilua, suunnittelua ja valmistusta sekä tuotteiden käyttöä. Koulutusta ja tutkimusta kuvaavaksi nimikkeeksi on vahvistumassa käsityömuotoilu, jossa korostuu toiminnan poikkitieteisyys ja suuntautuminen laaja-alaiseen luovaan

toimintaan. Käsityötieteessä on selvästi piirteitä tutkimuksen integraatiosta: tutkimuskohde on erillinen, tunnistettava; ei jatkuvassa liikkeessä. Käsityötieteestä on muotoutunut erityinen tapa tietää maailmasta: tietämistä ohjaa näkemys käsin tekemisestä sekä tekemisen konkreeteista ja mentaaleista tuloksista. (Seitamaa-Hakkarainen et. al. 2006.)

## Koulutukselle asetetut tavoitteet

Rahoitushakemuksessa koulutukselle asetettiin kunnianhimoiset tavoitteet:

”Käsityömuotoilun ja teknologian maisterikoulutusohjelman tavoitteena on uuden käsityötiedettä monipuolistavan koulutus-, tutkimus- ja kehittämiskokonaisuuden luominen, joka voi jatkossa kuulua Joensuun yliopiston perusopetukseen. Tämän lisäksi päätavoitteena on muotoilualan ammatillisten opettajien pätevytyminen ja osajien tuottaminen käsityömuotoilun ja teknologian tutkimukseen ja kehittämiseen. - - Projektin tavoitteena on myös hyödyntää paikallista osaamista ja välillisesti vahvistaa elinkeinoelämää sekä toimia käsityömuotoilun kehittämistyön edelläkävijöinä siten, että käsityömuotoiluun yhdistyy korkeateknologia. Paikallisen käsityön ja muotoilun tulevaisuuteen liittyy kasvavien kulttuuristen merkitysten vaihdanta, symbolituotanto ja elämysteollisuus mm. käsityö- ja elämysmatkailun muodossa.”

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Koulutuksen ja tieteenalan kehittämistavoitteisiin yhdistettiin opiskelijoiden pätevytyminen sekä paikallisen elinkeinoelämän rikastuttaminen. Tavoitteet ovat rahoitushakemuksille tyypillisesti suuret. Tavoitteiden toteutumisesta voidaan nähdä viitteitä melko nopeasti, mutta tarkemmin vasta pidemmällä aikavälillä kun nähdään miten tutkinnon suorittaneet opiskelijat toimivat jatkossa.

Rahoitushakemusta perusteltiin sillä, että Itä-Suomesta puuttuu käsityömuotoilualan yliopistotutkinnon suorittamisen mahdollisuus. Tämä vaikeuttaa ammattikorkeakoulujen opettajien pätevytymistä sekä alan tieteellisen tutkimuksen kehittämistä. Käsityötieteessä avautuu tutkimuskohteita, joita muut alat eivät tutki. Hakemuksessa todettiin edelleen, että käsityön ja muotoilun alle on mahdollista löytää yhteinen teoreettinen viitekehys, joka edistää käsityö- ja muotoilualan laaja-alaista tutkimus- ja kehitystyötä. (ESR -projektihakemus 2004.)

## Opiskelijoiden kokemukset

Opiskelijoille tehtiin syyskuussa 2006 kirjallinen kysely opintojen etenemisestä ja kokemuksista. Kyselylomakkeet jaettiin seminaareissa, joissa aivan kaikki eivät olleet paikalla. 24 aktiiviopiskelijasta 16 palautti lomakkeen. Opiskelemaan hakeutumisen syynä oli useimmiten ammatillinen pätevytyminen tai kehittyminen. Kiinnostus opintoja ja tieteenalaa kohtaan oli vahvistunut opintojen aikana. Lähes kaikki kokivat opinnoilla olleen myönteisiä vaikutuksia joko työhön tai näkemyksen

syventämiseen alasta ja käsityötieteestä. Jotkut suunnittelivat työtehtävien vaihtamista tai työnkuva oli laajenemassa.

Kyselyssä tuli ilmi opintojen kiinnostavuus ja tärkeys opiskelijoille ja se, että opinnot olivat syventäneet näkemystä käsityöalasta ja tutkimuksesta. Aikataulut ja opintojen ja työn yhteensovittaminen koettiin pulmalliseksi. Ennakoitua vähäisempi aikaisempien opintojen hyväksilukeminen oli pettymys. Ohjaajien tuki koettiin hyväksi, mutta opintosuorituksista kaivattiin arvosanan lisäksi kirjallista palautetta, joka auttaisi seuraavissa tehtävissä. Opiskeluryhmän tuki koettiin ensiarvoisen tärkeäksi.

Kyselyn tulokset eivät olleet yllätys vaan vastasivat käsitystä, joka oli syntynyt opiskelijoiden kanssa työskennellessä. Opinnot järjestetään kahdessa ryhmässä (Kuopio ja Joensuu) ja molemmat vaikuttavat muodostuneen kannustaviksi toisiaan tukeviksi ryhmiksi. Ilmapiiri on hyvä ja myös opettajan on hyvä työskennellä ryhmässä. Aikatauluongelmat ovat ymmärrettäviä ja opintojen tahti on ennakoitua tiiviimpi kun paljastui, että opintoja tarvitaan enemmän kuin oli alun perin suunniteltu. (Luutonen 2006.)

Opiskelijat ovat osanneet kytkeä hyvin käsityöalan ammatillisen osaamisen omaan tutkimukseensa. Tieteellinen lähestymistapa kiinnostaa, mutta omaksuminen ja kirjoittamisrutiinin kehittäminen vie oman ajan. Opiskelumotiivi on useimmilla opiskelijoilla hyvä. Monimuoto-opiskelu tuntuu luontevalta ja kampusnet on ahkerassa käytössä. Kokonaisuuden hahmottuminen ei täysin näytä onnistuneen. Samoin jatko projektin päätyttyä vaatii lisäinformaatiota.

## Osaamista tulevaisuuteen?

Sitran raportissa *Kohti hyvinvoivaa ja kilpailukykyistä yhteiskuntaa* (Hämäläinen 2006) katsotaan, että suomalainen yhteiskunta voi menestyä tulevaisuudessa, jos se pystyy kehittämään arkielämän ja kulttuurin muutoksiin taloudellisesti, sosiaalisesti ja ekologisesti kestäviä ratkaisuja. Näyttäisi siltä, että tarvitaan kykyä paneutua ihmisten elämäntapoihin ja kehittää niihin soveltuvia luovia ja innovatiivisia ratkaisuja. Koulutukselle tämä on kova haaste eikä kyseessä voi olla ainoastaan määrättyjen taitojen kehittäminen vaan ennen kaikkea luovan ajattelun ja ympäristön havainnoinnin sekä ongelmanratkaisutaidon vahvistaminen. Maisteriohjelman opiskelijoilla on käsi- ja taideteollisuusalan vankka ammatillinen osaaminen taustallaan ja maisteriopinnoissa syvennetään heidän ymmärrystään näistä asioista. Ainakin näin opintojen keskivaiheilla tämä tuntuu toimivalta. Lopullisesti asia selviää vasta pitemmällä aikavälillä kun nähdään saattavatko opiskelijat opintonsa päätökseen ja miten heidän työuransa jatkossa kehittyy.

Globalisoituminen avaa maailmanlaajuisia mahdollisuuksia, mutta muuttaa kilpailun myös globaaliksi. Sitran raportissa (Hämäläinen 2006) muistutetaan, että globaaleilla markkinoilla pärjää vain absoluuttisella kilpailuedulla. Käsi- ja taideteollisuusosalalla pitäisi löytää uusia tuotteita eikä vain

tyytyä valmistamaan uusia versioita samasta teemasta. On myös arveltu, että ihmisten kiinnostus materiaalisiin tuotteisiin vähenee. Hyvinvointi, mielihyvä ja turvallisuus säilyvät ihmisille tärkeinä asioina. Käsityöalalla on todennäköisesti mahdollisuuksia hyvinvointimarkkinoilla. Tämä onkin valittu koulutusohjelman yhdeksi painopisteeksi. Tarpeiden tyydytys tapahtuu Sitran raportin mukaan monissa arkipäivän askareissa ja rooleissa. Ehkä käsityöalan yrittäjän kannattaisikin paneutua nykyistä paremmin arjen tilanteisiin ja ryhtyä kehittämään tuotteita, jotka parantavat elämänlaatua arjessa. Tarpeettomat koriste-esineet tai epäkäytännölliset arkiesineet eivät välttämättä ole tällaisia. Ihmiset panostavat yksilölliseen hyvänoloon ja kaipaavat yksilöllisiä tuotteita ja palveluja. Tämä avaa myös mahdollisuuksia uusille innovaatioille. Olisiko myös tarpeen lähteä taiteilijamaisesta yksinoikeudesta itsensä toteuttamiseen rohkeasti asiakkaiden pariin ja suunnittelemaan yhdessä asiakkaiden kanssa. Tämä ei tarkoita suinkaan muotoilun tason laskua vaan entistä vaativampaa muotoiluhaastetta.

## Käsityöalan yritystoimintaa edistämään

Kauppa- ja teollisuusministeriö on valmistellut käsityöalan yritystoiminnan kehittämisstrategian, *Käsillä yrittäminen. Käsityöalan yritystoiminnan kehittämisstrategia 2006-2013*. Strategiaan on kirjattu visio:

”Nykyistä suurempi osa käsityöyrityksistä on kannattavia kasvuyrityksiä, mutta valtaosa on pieniä yrityksiä, jotka toimivat kannattavasti. Yritykset tunnetaan kansainvälisesti hyvin muotoillusta ja mielenkiintoisista asiakaslähtöisistä tuotteistaan ja palveluistaan. Tuotteet ja palvelut ovat helposti asiakkaiden tavoitettavissa internetin, liikkeiden ja muiden jälleenmyyjien kautta. Käsityöalan yritykset ovat verkostoituneet keskenään sekä matkailu-, kulttuuri- ja hyvinvointisektorin toimijoiden kanssa. Monikulttuurisuus on alan vahvuus. Yrittäjien substanssi- ja liiketoimintaosaaminen on vahvistunut.”

Visiossa korostetaan yritysten kannattavaa toimintaa, tuotteiden hyvää muotoilua ja asiakaslähtöisyyttä, tuotteiden saatavuutta ja sitä, että käsityöala verkostoituu kulttuuri- ja hyvinvointisektorin toimijoiden kanssa sekä näkee monikulttuurisuuden vahvuutena. Maisterikoulutusohjelmassa tuodaan näitä asioita esiin, mutta ei anneta konkreettista yritystoimintaan liittyvää opetusta. Koulutuksen tehtävänä nähdään enemmän avata asioita niin, että vision tavoitteet voisivat myös toteutua.

Työryhmän työn taustalla perusselvityksenä on toiminut Sitran ja Käsi- ja taideteollisuusliitto Taidon toimesta julkaistu raportti *Käsin tehty tulevaisuus* (Luutonen & Äyväri 2002), joka sisältää eri kirjoittajien toimesta kuvatun käsityöalan yritystoiminnan nykytilan. Julkaisun toimittajat ovat koonneet aineiston perusviesteihin ja kehittämisajatuksiin. Yksi keskeinen havainto on, että käsityöyrityksiä ei tule arvioida pelkästään perinteisin määrällisin mittarein vaan huomiota tulee kiinnittää myös niiden sosiaalisiin ja kulttuurisiin vaikutuksiin. Käsityöyritysten palvelut voivat olla konkreettisia materiaalisia tuotteita, mutta yhä useammin immateriaalisia kuten koulutus- ja elämyspalveluja. Sama ajattelu näkyy maisterikoulutusohjelman sisällössä.

Työryhmän toimeksiannosta tehdyt kaksi tutkimusta julkaistiin vuonna 2005. *Käsityöyrittäjyys Suomessa 2000-luvulla* (Lith 2005) on toimialaselvitys, joka antaa yleiskuvan käsityöyrittäjyyden ilmenemismuodoista, yritysrakenteesta ja kehitystrendeistä. Lith paneutui tarkasti tilastoihin ja siihen, miten käsi- ja taideteollisuusalan yrittäjyys voidaan poimia tilastoista näkyviin. Tutkimuksessa päädyttiin siihen, että Suomessa toimi vuonna 2003 9000–10 000 käsityöyritystä, jotka työllistivät lähes 14 000 työntekijää ja välillisesti noin 21 000 henkeä. Tutkimus osoittaa selvästi, että käsityöala on Suomessa merkittävä toimiala, jonka työllistävä vaikutus on huomattava. Tähän vaikuttaa ainakin se, että Suomessa on runsaasti käsi- ja taideteollisuusalan koulutusta. Monet maisterikoulutusohjelman opiskelijat toimivat opetustehtävissä ja ovat osaltaan vaikuttamassa siihen, minkälaisia valmiuksia opiskelijat saavat koulutuksen kautta.

*Käsityö – yrittäjyys – hyvinvointi. Uusia liiketoimintapolkuja* -tutkimus (Kälviäinen 2005) hakee nimensä mukaisesti käsityöyrityksille uusia liiketoiminta-alueita. Selvityksessä löydettiin käsityöyrittäjyyden ja hyvinvointialojen yhtymäkohtia. Selvitys myös vahvisti oletuksia, että käsityöalalle rinnakkaiset toimialat edustavat suurempia asiakasvirtoja ja että rinnakkainen toimiala kykenee tarjoamaan omille asiakkailleen lisäarvoa käsityötuotteiden avulla. Käsityölle nähtiin mahdollisuuksia seikkailujen, yhdessäolon, hoivan, yksilöllisyyden ja identiteetin, mielenrauhan ja vakuuttavuuden markkinoilla. ”Hyvinvoinnin itsenäiseen ylläpitoon liittyvissä käsityöyrittäjyyden toimintamalleissa ja mahdollisuuksissa korostuvat yksityisen asiakkaan hankinta- ja ostokokemuksen syventäminen, oman identiteetin rakentaminen käsityötuotteiden avulla, juurien säilyttäminen ja etsiminen, oma suunnittelu ja tekeminen sekä läheisille ostaminen ja tekeminen. Myös matkailuun ja luontoon liittyvät mahdollisuudet tulivat merkittävällä tavalla esiin.” Maisterikoulutusohjelmassa tarkastellaan käsityötä hyvinvointia tuottavana toimintana, jossa aineeton prosessi voi olla materiaalista tuotetta tärkeämpi.

Aineettomientuotteiden merkityksen kasvaessa tarvitaan uudenlaisia valmiuksia. Amerikkalainen kirjoittaja ja opettaja Daniel H. Pink (2005) esittää kirjassaan ”The Whole new Mind”, että olemme siirtymässä käsitteelliseen aikaan ja tulevaisuudessa tarvittavat kyvyt ovat muotoilu, tarina, sinfonia, eläytyminen, peli ja merkitys. Hän arvelee, että ammatteja ovat (suoraan käännettynä) esimerkiksi luoja, eläytyjä, konseptisuunnittelija ja merkityksellistäjä. Pinkin mielestä tarvitaan toisenlaista ajattelua, jota hän kutsuu nimillä ”high concept” ja ”high touch”. HC liittyy taiteellisen ja tunteellisen kauneuden luomiseen ja HT inhimilliseen kanssakäymiseen.

## Lopuksi

Meneillään olevasta koulutusohjelmasta ei voi vielä tehdä kovin syvällisiä johtopäätöksiä, mutta näyttäisi siltä, että työelämässä jo pitkäänkin toimineet käsi- ja taideteollisuusalan ammattilaiset antavat koulutukselle uusia hyödyllisiä haasteita. Heille käsityötieteen pohtiminen avautuu aivan toisin kuin



suoraan koulusta tulleille opiskelijoille. Myös tutkielmat saavat kokemuksen tuomaa syvyyttä. Käsi- ja taideteollisuusalan ammattilaiset ovat myös vaativia opiskelijoita. Tavoitteena on, että opiskelijoille koulutuksen kautta avautuneet uudet näkökulmat toimitaisivat työelämää rikastuttavina.

Helsingin yliopisto toteutti 1990-luvulla laajan valtakunnallisen kokeilukoulutusohjelman käsi- ja taideteollisuusalan opettajille. Ohjelman aikana suoritettiin yli 50 kasvatustieteen maisterin tutkintoa. Opiskelijakyselyjen perusteella koulutusohjelma ja käsityötiede olivat erittäin tärkeitä opiskelijoille. Käsityötiede toi tieteellisen perustan ja analyysoivan otteen koko käsi- ja taideteollisuusosalalle. Koulutusohjelmalla oli suuri merkitys opiskelijoiden ammatilliseen kehittymiseen ja käsityötiede koettiin opiskelijaa ja hänen työtään uudistavaksi voimälähteeksi. (Kaipainen 1999.) Kokeilukoulutusohjelman kautta opintonsa suorittaneista moni toimii tällä hetkellä ammattikorkeakouluissa ja muissa käsi- ja taideteollisuusalan keskeisissä tehtävissä.

On nähtävissä viitteitä siitä, että koulutus on tarjonnut monitasoisia luovia kohtaamisia. Ensinnä opiskelija kohtaa itsensä ja suhteensa omaan ammattiinsa ja osaamiseensa uudella tavalla. Yliopiston ja ammattikorkeakoulujen ja työelämän kohtaaminen nostaa esiin kysymyksiä koulutuksen järjestämisestä ja uusista yhteistyömalleista. Hyvin tärkeä kohtaaminen tapahtuu opiskelijoiden kesken. Ryhmästä on muodostunut kiinteä ja kannustava. Voisi olettaa, että tällä on vaikutuksia jatkossa kun opiskelijat toimivat samalla alueella käsi- ja taideteollisuusalan erilaisissa tehtävissä. Koulutusohjelmassa opettavat saavat tarkastella tehtäväänsä uudesta näkökulmasta kun opiskelijat ovat aikuisia käsi- ja taideteollisuusalan asiantuntijoita.

Tom Kelly (2006) korostaa tuoreessa kirjassaan ryhmän merkitystä innovaatioiden synnyssä. Hän näkee tärkeänä sen, että ihmisillä on erilaista osaamista ja erilainen rooli ryhmässä. Koulutusohjelman tutkimusseminaareissa asia on nähtävissä esimerkiksi kun käsiteltävänä on jonkun opiskelijan tutkimussuunnitelma. Parhaimmillaan ryhmästä löytyy henkistä tukea, konkreettisia vinkkejä ja luovia ajatuksia.

Olen artikkelissani avannut käsityömuotoilun ja teknologian maisterikoulutusohjelman tavoitteita ja kokemuksia sen toteuttamisesta sekä viitteitä mahdollisista tuloksista. Olen nähnyt koulutuksen myönteisenä enkä juurikaan tuonut esiin karikoita. Haasteena on innostuksen ja motivaation säilyminen paljon työtä tuottavan koulutusjakson koko ajan. Opiskelijoille tuottaa pulmia ajan järjestäminen sekä perheen, työn ja opintojen yhteensovittaminen. Ongelmien yli kantaa parhaiten opintojen tuottama ilo ja vetovoima sekä luonnollisesti tarve pätevyitä.

## Lähteet

- ESR -projektihakemus. 2004. Euroopan sosiaalirahaston osittain rahoittamat projektit. Tavoiteohjelmat 1, 2 ja 3. Opetusministeriö/ Itä-Suomen lääninhallitus.
- ESR -rahoitus päätös. 2004. Rahoituksen myöntäminen Itä-Suomen tavoite 1 -ohjelman mukaiselle projektille Käsityömuotoilun ja teknologian maisterikoulutusohjelma. Itä-Suomen lääninhallitus.
- Hämäläinen, Timo. 2006. Kohti hyvinvoivaa ja kilpailukykyistä yhteiskuntaa. Kansallisen ennakkointiverkoston näkemyksiä Suomen tulevaisuudesta. Helsinki: Sitra.
- Kaipainen, Minna. 1999. Käsityöalan kokeilukoulutusohjelman loppuraportti. Käsi- ja taideteollisuusalan yhteistoimintakokeilu 1990-1998. Helsingin yliopiston Kotitalous- ja käsityötieteiden laitoksen julkaisuja 1.
- Kelley, Tom. 2006. The ten faces of innovation. Strategies for heightening creativity. London: Profile books.
- KTM. 2006. Käsillä yrittäminen. Käsityöalan yrittäjyyden kehittämisstrategia 2007–2013. Helsinki: Kauppa- ja teollisuusministeriö.
- 131 Käsityömuotoilun ja teknologian maisterikoulutusohjelma. Joensuun yliopiston Savonlinnan opettajankoulutuslaitos.
- Kälviäinen, Mirja. 2005. Käsityö – yrittäjyys – hyvinvointi. Uusia liiketoimintapolkuja. KTM Julkaisuja 9/2005.
- Lith, Pekka. Käsityöyrittäjyys Suomessa 2000-luvulla. Yritykset ja alan keskeiset kehityslinjat. KTM Julkaisuja 10/2005.
- Luutonen, Marketta. 2006. Välikysely käsityömuotoilun ja teknologian maisterikoulutusohjelman opiskelijoille. Joensuun yliopiston Savonlinnan opettajankoulutuslaitos.
- Luutonen, Marketta & Äyväri, Anne (toim.) 2002. Käsien tehty tulevaisuus. Näkökulmia käsityöyrittäjyyteen. Helsinki: Sitra ja Käsi- ja taideteollisuusliitto Taito.
- Luutonen, Marketta., Ritva Koskennurmi-Sivonen, Jussi T. Koski, Anna-Mari Raunio, Kirsti Salo-Mattila, Pirita Seitamaa-Hakkarainen ja Erja Syrjäläinen. 1999. Työrukkanen. Tutkimus Helsingin yliopiston käsityönopeettajan koulutuksessa.
- Pink, Daniel H. 2005. The Whole new Mind. New York: Riverhead Books.
- Seitamaa-Hakkarainen, Pirita., Marketta Luutonen, Sinikka Pöllänen, Anna-Mari Raunio, Outi Sipilä, Minna Kaipainen, Virpi Turunen, Leena Vartiainen ja Tarja Kröger. 2006. Käsityötieteen ja käsityömuotoilun tutkimusohjelma Savonlinnan opettajankoulutuslaitoksessa.

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## Dialogi yhteiskehittelyn näyttämöllä

[Julkaistu aiemmin teoksessa Ammattien kutsu. Ammattikorkeakoulut ja estetiikka. Opetusministeriön julkaisuja 2006; 18. Helsinki: Yliopistopaino.]

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Tulevaisuuden työ perustuu entistä enemmän yhteiskehittelyyn ja kulttuuristen merkitysten tuotantoon. Artikkelissani pohdin, miten tutut ja koetellut työntekijän tukemisen keinot, mentorointi ja työnohjaus, soveltuvat hyvin tukemaan työn kehittämistä myös luovan talouden ja verkostoyhteiskunnan olosuhteissa.

Etsin mentoroinnin ja työnohjauksen estetiikkaa draamasta ja sellaisista metaforista kuin tyhjä tila, pysähtynyt liike ja kelluminen. Verkostoyhteiskunnassa tarvitaan persoonallisen kohtaamisen näyttämöitä, joilla merkitysten muodostaminen saa rauhassa olla potentiaalisen tulemisensa tilassa. Merkitystaloudessa tapahtuva mentorointi ja työnohjaus edellyttävät ohjaajalta kohtaamisen taitojen lisäksi entistä rikkaampaa kulttuurista osaamista, laaja-alaista merkitysten tuntemusta ja taiteellista, tieteellistä ja pedagogista viisautta.

Taideopetuksen mestari–kisälli-traditiossa painotetaan mestarin persoonan merkitystä. Merkitysten taitaminen on kasvu- ja oppimisprosessi. Ammattikorkeakoulut monialaisen kulttuuriopetuksen, elinikäisen oppimisen ja tutkimus- ja kehitystoiminnan palvelukseen synnytettyinä ”oppimiskoteina” soveltuvat erityisen hyvin huolehtimaan myös merkitystalouden perusedellytysten luomisesta. Samaan aikaan yritysten oma tutkimus- ja kehitystoiminta joutuu painottumaan entistä enemmän sopivien merkitysten seulomiseen merkitysten vuolaudesta, merkityksillä erottautumiseen ja omien merkkikonseptien hiomiseen.

## Osapuolet esittelyssä

Mentoroinnilla on tarkoitettu ohjausta kontekstissa, jossa painottuu nimenomaan ohjaussuhde. Mentorointi on toisaalta yhdistetty mestarin ja kisällin suhteeseen; toisaalta se on alusta asti haluttu nostaa puhtaasti ammatillisia tietoja ja taitoja välittävän suhteen yläpuolelle, osaksi johtajien koulutusta. Työelämäkirjallisuudessa mentorista on käytetty myös tuttavallista työkummi-nimitystä. Eräänlaisena välimuotona voidaan puhua ohjaussuhteista korkeakouluopinnoissa ja erityisesti tieteellisessä jatkokoulutuksessa, ja silloin painotetaan erityisen vaativaan ammattiin, tutkijaksi eli tieteenteon mestariksi kasvamista. Työnohjausta käsittelevä kirjallisuus on oma, laaja ja monitahoinen alueensa, jossa puhutaan yleisemmin työn tekemisen tukemisesta, ei ainoastaan johtajiksi tai tutkijoiksi kasvavista. Myös työnohjauksen yhteydessä asetetaan ammatillisia tavoitteita ja puhutaan oppimisesta ja kasvamisesta.<sup>1</sup> Mentori ja työnohjaaja voivat siis painotuksesta riippuen olla sekä nimenomaisen ammatillisen kehitysprosessin katalysaattoreita tai enemmänkin arkipäivässä läsnä olevia työn tekemisen tukihenkilöitä.

Tässä artikkelissa esiintyy omalla äänellään joukko ihmisiä, jotka ovat jo pitkään työskennelleet luovilla aloilla ja samalla mentoreina tai työnohjaajina. Heidän kertomuksistaan näkyy, että työkummit, ohjaajat ja työnohjaajat dialogin ammatillisina toimivat jo nyt postmodernin epäjatkuvuudessa kelluvina tukisaarekkeina. Saarekkeiden lomassa on alkanut virrata toistaiseksi vielä haparoiva ja ihmettelevä puhe meitä ympäröivästä laajemmasta tulevaisuuden toimintaympäristöstä, luovasta taloudesta, joka voi nousta koko yhteiskuntaamme uudistavaksi tulvaksi.<sup>2</sup>

Uusi, paljolti aineettomaan arvonlisäykseen perustuva luova talous edellyttää

- a) asiakkaiden ja eri aloilta tulevien työntekijöiden yhteistyöhön liittyviä yhteiskehittelyn taitoja, jotka ovat lähtökohta, kun halutaan kehittää käyttäjäkeskeisten tuotteiden ja palveluiden tuotantoa
- b) yhteiskuntaa, joka entistä enemmän rakentuu ihmistenvälisen kohtaamisen erityyppisistä näyttämöistä. Näillä näyttämöillä opiskellaan merkitysten vaihtamista ja tulkitsemista. Kun tulevaisuudentutkimus puhuu informaatioyhteiskunnan jälkeen **verkostoyhteiskunnasta**, painotetaan samalla sitä, että ihmisten kohtaamiset – ja samalla kulttuuristen merkitysten vaihtaminen ja tulkitseminen – eivät tapahdu paikkaan

<sup>1</sup> Mentorointia osaamisen johtamisen keinona esittelevää uudempaa suomalaista kirjallisuutta edustaa Tuulikki Juuselan, Tuula Lillian ja Jari Rinteen kirjoittama Mentoroinnin monet kasvot. Helena Aittolan väitöskirja Tutkimustyön ohjaus ja ohjaussuhteet tieteellisessä jatkokoulutuksessa kartoittaa ohjausta korkeakouluopinnoissa. Työnohjaus merkityksessä supervision –perinteestä kertoo erityisesti Leila Keski-Luopan kirja Työnohjaus vai superviisaus. Kirjan näkökulma painottaa oppimista.

<sup>2</sup> Turun kauppakorkeakoulun Tulevaisuuden tutkimuskeskus selvitti luovan talouden käsitettä Sitran KULTA –hankeessa vuosina 2002-2003. Hanke pohti kulttuurin roolia ja mahdollisuuksia taloudessa ja yhteiskunnassa.

sidotusti kuten heimoyhteiskunnassa, vaan uudella tavalla, verkostoitumalla globaaleille foorumeille. Lisäksi luovassa taloudessa jopa valtaosa itse tuotannosta voi olla kohtaamista edistävien tuotteiden tai kohtaamispalveluiden tuottamista.

Turun kauppakorkeakoulun Tulevaisuuden tutkimuskeskuksen johtaja Markku Wilenius on puhunut painavasti siitä, että luova talous ei synny tyhjästä, vaan sille on oltava olemassa joukko edellytyksiä. Hänen mukaansa tarvitaan kulttuuriosaamisen välittämistä kolmella erityyppisellä taitoulottuvuudella. Aineettomaan arvontuotantoon perustuvassa yhteiskunnassa tarvitaan

1. uudenlaista käsityöläisyyttä, **taitajan ja taiteilijan luovaa suunnittelu- ja toteutuskykyä** tehdä tuotteista kiinnostavia, esteettisiä ja erottumiskykyisiä
2. yhä sensitiivisempää **kulttuurista lukutaitoa**, kykyä lukea erilaisia etnisiä, alueellisia ja organisaatioiden kulttuureja ja alakulttuureja
3. uudenlaista luovien asiantuntijoiden johtamiseen soveltuvaa **johtamiskulttuuria**, joka luo maaperän innovatiivisten ratkaisujen tuottamiselle ja käyttöönnotolle.

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Mentoroinnissa ja työnohjauksessa on kysymys eräänlaisesta elämänviisaudesta. Ohjausta ei voida yhdistää suoraviivaisesti työn tekemisen taidon eli ”temppeujen” välittämiseen mestari–kisälliperinteessä eikä myöskään kulttuurisen lukutaidon kehittämiseen, vaan pääpainotus on pikemminkin yleisessä johtamisen tukemisessa. Toimenpiteillä joko tuetaan johtajaksi pyrkiviä tai autetaan työyhteisöjen johtamistyötä tukemalla alaisia työssään.

Merkitystaloudessa mentorointi ja työnohjaus toteutuvat jo varsin uudenaikaisessa työn kulttuurissa. Kulttuurinen merkitystuotanto on yhteinen viitekehys koko työprosessille sisällöistä talouteen ja tekniikkaan ja samaan aikaan työn organisoimisen tavat ja työssä selviytyminen edellyttävät, että jokainen työntekijä paitsi tuntee myös hallitsee yhä laajempia alueita työprosessissa. Erottelu johtamiseen ja alaisena olemiseen ei enää ole riittävää tai edes relevanttia, kun puhutaan yhteiskehittelyyn perustuvasta, suurta itseohjautuvuutta vaativasta työstä esimerkiksi konvergenssiin perustuvan median tuotekehityksessä.<sup>3</sup>

<sup>3</sup> Tekninen valmius konvergenssiin on sittenkin usein helposti saavutettavissa verrattuna siihen miten haastavaa on työskentely moniammatillisissa tiimeissä ja eri organisaatiokulttuurien ja merkitysten vuoropuhelun ohjaaminen ja hyödyntäminen. Erityisen vaikeaa on luoda teknisten ja kulttuuristen merkitysten vyyhdestä uusi sisältöpalvelu, jossa aidosti ja uudella tavalla hyödynnetään medioiden konvergenssi. Sisältötuotantoyrityksen työntekijän roolien moninaisuutta ja tiimityöhön ja itseohjautuvuuteen perustuvaa johtamistapaa on tutkinut mm. Hannele Huhtala. Voidaan todeta, että uusissa työn organisoimisen tavoissa ollaan vasta alussa ja siksi viipyvät myös toiminnan tulokset, esimerkiksi älyllisesti ja emotionaalisesti haastavat mobiilisisällöt.

## Estetiikka elämisessä

Richard Shusterman on kuvannut teoksissaan pragmatistista estetiikkaa, jossa esteettisen piirin nähdään laajenevan koko elämän alueelle.<sup>4</sup> Pragmatistinen estetiikka painottaa, että taidetta eivät ole vain taiteen representaatiot, vaan taiteen historiaa tehdään tässä ja nyt, kaiken aikaa. Shustermanin mukaan taidetta ja esteettisen kokemuksen tekemistä on ollut ja on edelleen kaikkialla, mutta pragmatistisen estetiikan merkitys voi korostua uudelleen postmodernissa ja luovan talouden aikakaudella. Shustermanin lähtökohtana on muutamien muiden keskeisten esteetikkojen tapaan **esteettinen kokemus**, se että esteettisyys tuntuu, sävähdyttää ja koskettaa.<sup>5</sup>

Monikulttuuriset erot, dialogin sisältämä hyperteksti, epäjatkuvuus, uudet yhdistelmät, kaikki tämä on tyypillistä juuri postmodernille ja verkostoyhteiskunnalle. Kaikki tämä on pragmatistisen estetiikan mukaan läsnä päivittäin ihmisten kohtaamisten näyttämöllä, jossa nerous ja tyyli näyttäytyvät kaiken aikaa arkielämän kehitteillä olevissa käytännöissä. Postmodernin estetiikka liittyy paitsi taiteen arkipäiväistymiseen ja jatkuvasti uusiin populaarikulttuurin muotoihin, ennen kaikkea itseilmaisun tapoihin ja tapaan brandata itsensä esimerkiksi pukeutumalla. Jokainen meistä on ja saa taas olla esiintyvä taiteilija, nauttia esteettisen elämyksen tuottamisen keinoista. Postmodernissa on tilaus itseilmaisuuksiin perustuvalla esteettisellä kokemuksella. On esitetty, että juuri itseilmaisun lisääntyminen pystyy torjumaan elämää uhkaavaa mekanisointumista, ihmisen muuttumista informaatioprosessien jatkeeksi.

Pragmaattinen estetiikka tulee siis samalla väittäneeksi, että esteettisen kokemuksen paikka voisi verkostoyhteiskunnassa, luovan talouden olosuhteissa löytyä entistäkin enemmän kohtaamisesta, dialogin toteutumisen tilanteesta. Tämä kulttuurinen paluu esiintyjän ja katsojan kohtaamistilanteeseen merkitsee samalla paluuta kaikkein alkuperäisimpään, sillä teatterin esitystilanteiksi muuttuneen jokapäiväisen elämän aikamuodoksi tulee väistämättä yksi taiteen vanhimmista aikamuodoista, draaman aikamuoto<sup>6</sup>, **jatkuva tulemisen tila**. Esityksenä toteutuvien itseilmaisun muotojen yhteinen ja keskeisin tunnuspiirre on draaman teorian mukaan aito läsnäolo, nykyisyys ”tässä ja nyt”, ja tämä läsnäolon tilanne sisältää aina potentiaalisen liikkeellelähdon johonkin suuntaan, eli yksi draaman kohtaaminen sisältää aina oman tulevaisuutensa siemenet.

<sup>4</sup> Tässä on käytetty lähteinä Shustermanin teoksia *Pragmatist Aesthetics: Living Beauty, Rethinking Art* (suom. *Taide, elämä ja estetiikka*) ja *Performing life*.

<sup>5</sup> Esteettisen elämyksen luonnetta on pohtinut mm. Monroe C. Beardsley, jota on esitelty kirjassa *Suomalainen estetiikka 1900-luvulla lähinnä Eino Krohnin kautta*. Richard Shusterman päätyy esteettisen kokemuksen luonnetta pohtiessaan sillanrakentajan rooliin, hän väittää, että esteettinen kokemus on sekä ylihistoriallinen että historiallinen, ja että se ei missään tapauksessa kuollut modernin myötä eikä sitä voida jättää vain taiteen omaisuudeksi. Taiteen ymmärtäminen vain yhdeksi yhteiskunnan alueeksi, kaunotaiteeksi, sekä kuvastaisi että vahvistaisi Shustermanin mukaan yhteiskunnan jakautumista käytännön työhön ja esteettiseen kokemukseen. Tämän jälkeen oltaisiinkin jo varsin perustavan erottelun tiellä väittämässä, että taide on perustavasti eri asia kuin käsityö ja työn keinot ja päämäärät ylipäänsä voidaan erottaa toisistaan.

<sup>6</sup> Draaman teorian uudelleenpohdintaa kontekstuaalisesta näkökulmasta edustaa Heta Reitalan ja Timo Heinosen toimittama kirja *Dramaturgioita*.



## Aineettomien merkitysten tulvassa

*Ohjaaja-toimittaja Ria Karhila<sup>7</sup> on tv-ilmaisun opettajana huomannut, että oppimisprosessi näkyy parhaimmillaan tekemisen kehittämisessä. Ensin opetellaan nuotit, sitten aletaan soittaa pieniä kappaleita, sitten suurempia. Kun opiskelija tekee parempaa jälkeä kuin opettajansa, on juhlan aika.*

Ajatus luovasta taloudesta on periaatteessa yksinkertainen, jopa väistämättömän tuntuinen. Teollistuneissa ja vauraissa yhteiskunnissa on jo kauan sitten siirrytty aikakauteen, jolloin elämisen perustarpeet on tyydytetty. Luovaan talouteen siirtymisen ensimmäinen edellytys on, että taloudellinen tuotanto ja kulutus entisestäänkin vähäaineistuu, tietokoneiden sijaan tulevat mikropiirit, koko yrityksen osaaminen voidaan taltioida postimerkkiä pienempään tilaan. Jo osaamisoyhteiskunnassa yhä suurempi osa tuotteen arvosta on aineetonta. Luovassa taloudessa kaikkeen tähän sekoittuu kulttuuri. Tuotteiden ja palveluiden kulttuuriset ominaisuudet nousevat keskeisiksi kulutukselle jopa niin, että tuotteita ei enää osteta lainkaan niiden alkuperäisen käyttöarvon, vaan niihin liitettyjen kulttuuristen merkitysten perusteella.

Luovan talouden kanssa rinnakkain kehittyy uudenlainen, pirstaloituva tuotantoprosessi. Perinteiset teollisuuden arvoketjut purkautuvat ja pirstoutuvat osiin, ja tietyn tuotteen tai palvelun tuottamiseen riittää entistä pienempi omistusosuus koko arvoketjusta. Keskeisiksi huomion kohteiksi nousevat osaprosesseja rakentavat verkottuneet toimijat, ja strategisia kohteita ovat kokonaisuuden osat ja niiden laatu. Luovassa taloudessa yhä pienempien osaprosessien laatua määrittävät kulttuuriset merkitykset, esimerkiksi se miten tietty tekemisen tapa sopii tekijöiden ja käyttäjien toimintakulttuuriin.

*Kehittämispäällikkö Mikko Bruun<sup>8</sup> Yleisradiosta puhuu työn kehittämisen spiraalista koko suomalaisen yhteiskunnan kannalta keskeisimmässä merkitystuotantoon keskittyneessä julkisen palvelun joukkoviestintäyhtiössä. Johtamiseen liittyvät koulutukset ja työnohjaus ovat lähteneet liikkeelle samaan aikaan, kun yhteiskunnallinen toimintaympäristö on ollut perusteellisessa muutoksessa. Kyseessä on kokonaisen kulttuurisen paradigman murrosvaihe, joka vaikuttaa jokaisen työntekijän työlle ja persoonalle asettuviin vaatimuksiin. Modernin aika, jatkuvuuden aika, on loppunut. On siirrytty epäjatkuvuuden ja liikkuvien, monipersoonaisten yleisöjen aikakauteen.*

Aineettoman arvontuotannon ja merkitystalouden olosuhteissa perätään kaiken aikaa suurempaa tietämystä yksilöiden käyttäytymisestä ja kulutuskäyttäytymisestä. Käyttöarvon oheen on löydetty uusi

<sup>7</sup> Ohjaaja-toimittaja Ria Karhila on toiminut radion ja television journalistisiin tehtäviin valmistuvien medianomien kouluttajana. Hän kuvaa itseään mentorin identiteetillä työskenteleväksi tv-taitojen eli ohjauksen ja toimittamisen tuntiopettajaksi.

<sup>8</sup> Kehittämispäällikkö (radiotoiminnassa) Mikko Bruunin tehtäviin Yleisradiossa ovat kuuluneet 1990-luvun puolivälistä alkaen toimialan johdon koulutus, tuottajakoulutus ja vapaaehtoisuuteen perustuvat työnohjausryhmät.

tasoa, joka näyttää tuovan rajattomia mahdollisuuksia. Luovan talouden teoreetikkojen mielenkiinto onkin useimmiten kohdistunut yhteiskunnan ja kulttuurin monimuotoisuuden ja **moniarvoisuuden, diversiteetin lisäämiseen**. Monien mielestä tarvitaan entistä mosaiikkimaisempaa kulttuuritoimijoiden kenttää, jossa sitten voi syntyä uusia yhdistelmiä. Merkitysten tuotannon vapaaseen kilpailuun uskovioiden mielestä kulttuuritoimijoiden kentästä ikään kuin automaattisesti, kuin sienimetsän sieninä, esiin nousevat ne, jotka pystyvät luomaan uutta kulttuuria ja toimimaan myös kansainvälisellä tasolla. Tämän avoimen kulttuurikentän vastakohtana on pidetty aikaisempaa kulttuuriosaamisen karsinoitumisen tilannetta, jossa taideoppilaitoksissa ja taidealalla toimivat sisäpiiriläiset toimivat etuisuuksien jakajina itse itselleen ja oli vaara, että ammattitaidottomuus tai keskinkertaisuus, klikkiytyminen ja keskinäinen kateus saattoivat estää uusien ideoiden esiinnousua.

Luovaa taloutta onkin lähestytty usein siten, että luovuus ikään kuin pyritään poimimaan ulos taidealoilta, joiden hallussa se on perinteisesti ollut, ja pyritään lähentämään sitä liiketoiminnan maailmaan. Samalla on torjuttu ponnekkaasti se kulttuurikriittisen koulukunnan kritiikki<sup>9</sup>, että kulttuurin markkinaistuessa myös luovan työn autonomia ja itseisarvo uhkaa hävitä. Mutta luovassa taloudessa tapahtuu paljon enemmän kuin luovuuden irtoaminen perinteisiltä taidealoilta. Kulttuurin ja talouden asetelma on kääntynyt täysin pääläelleen, ja luovasta työstä ja sen autonomisuuden perinsiipeistä on tullut sisäänrakennettu välttämättömyys aineettomaan arvontuotantoon perustuvan yhteiskunnan ja talouden säilymiselle.<sup>10</sup>

Työn tutkijoiden Bart Victorin ja Andrew C. Boyntonin<sup>11</sup> teoriassa merkitystuotannon sijasta puhutaan vanhimmasta työn kehitystyyppistä, käsityöstä. Heidän mukaansa käsityö on työn muoto, joka syntyi työn muodoista ensimmäisenä ja jota esiintyy eri tavoin myös myöhempien työn muotojen sisällä. Kun käsityö liittyy teollistuneessa yhteiskunnassa muihin, mekanistuneempiin ja automatisoituneempiin työn muotoihin kuten massatuotantoon, sen tehtävänä on soveltaa uusissa olosuhteissa käsityölle ominaisia luovia lähtökohtia. Käsityötä tarvitaan, kun muunnellaan aina uusia tuotteita kohtaamaan uusia asiakasryhmiä ja niiden uusia tarpeita. Määritelmän mukaan

1. käsityö luo muodoltaan ja sisällöltään uniikkeja tuotteita, joiden on tarkoitus aikaansaada
2. vahvoja ja uniikkeja vaikutelmia asiakkaissa.

<sup>9</sup> Theodor Adornon ja Max Horkheimerin essee Kulttuuriteollisuus. Valistus joukkohuijauksena on saanut suomentaja Veikko Pietilän mukaan aseman keskeisimpänä frankfurtilaisten joukkoviestintä- ja massakulttuurijattelua edustavana tekstinä.

<sup>10</sup> Kun rajaan tarkasteluni kulttuurisiin merkityksiin, se tarkoittaa samalla sitä että tässä artikkelissa ei pohdita laajemmin, missä määrin siirtyminen luovaan talouteen on palaamista käsityöläisyhteiskuntaan. Tarkastelen käsityöläisyyttä vain siltä osin kuin se liittyy arvontuotamiseen merkityksillä.

<sup>11</sup> Bart Victor ja Andrew C. Boynton erottelevat viisi työn historiallista kehitystyyppiä. Käsityö, massatuotanto, prosessiosaaminen ja massaräätälöinti ovat nyt korvautumassa yhteiskehittelyyn perustuvalla työllä. Heidän mukaansa työn kehitystyyppit edellyttävät toisiaan siten, että aikaisempi vaihe sisältää sellaista osaamista joka on välttämätöntä seuraavassa kehitystyyppissä eli prosessiosaamiseen ei voida edetä ilman massatuotannon osaamista jne.

*Culminatumin johtaja Eero Holstila<sup>12</sup> on nähnyt uusien tietointensiivisten alojen tihentymiä eri puolilla maailmaa. Hänen mukaansa myös luovilla aloilla puhutaan tiedon tihentymistä ja luovista kampuksista. Luovuus ei näytä syntyvän täysin ajasta ja paikasta riippumatta, vaan se edellyttää pitkäaikaista henkilökohtaista vuorovaikutusta.*

Vielä luovaa taloutta ensimmäisenä laajasti kartoittaneessa suomalaiskirjassa yhteiskunnan sijaintia luovan talouden kartalla kuvataan kahdella varsin perinteisellä tunnusluvulla, tekijänoikeusteollisuuden jalostusarvolla ja kulttuurialoilla työskentelevän työvoiman määrällä. Viime vuosikymmenen lopulla suomalaisen tekijänoikeusteollisuuden jalostusarvo oli yli neljä prosenttia bruttokansantuotteesta, ja uudelle vuosituhannele siirryttäessä kulttuuriammateissa ja kulttuurin toimialoilla työskenteli Suomessa runsaat viisi prosenttia työvoimasta. Näiden kahden tunnusluvun käyttäminen ei kuitenkaan jatkossa riitä, jos luovan talouden synnyttämisessä pyritään kulttuuriosaamisen esiintymisen ja vaikuttavuuden laajentamiseen yhä uusille yhteiskunnan aloille niin, että merkitystuotannon ja käsityöläistyön osaaminen ei häviä vaan sen on mahdollista kehittyä yhä uusissa olosuhteissa.

Työn sukupolvia kuvailevassa kirjassaan Victor ja Boynton toteavatkin, että tuotannon kehittyessä syntyy jatkuvia uusia aukkoja suhteessa kuluttajan tarpeisiin ja haluihin, ja juuri käsityöläistyön ominaisuudet voivat palvella näiden aukkojen täyttämistä luomalla tuotteisiin uusia tyylejä, innovaatioita ja ainutlaatuisia piirteitä. Kulttuuristen merkitysten lukemisen ja luomisen taidot korostuvat, kun palveluita personoidaan, siirrytään kokonaan uusille markkinoille tai tarvitaan muuntelua. Käsityöläistyön ominaisuudet voidaankin yhdistää kokonaan uuteen yhteiskunnallisen toimeliaisuuden muotoon, merkitystalouteen. Luovassa taloudessa merkitysten moniarvoistuminen tapahtuu, kun kuluttajien erottautumisen tarpeet lisääntyvät.

<sup>12</sup> Uudenmaan osaamiskeskusohjelma Culminatumin johtaja Eero Holstila (1.6.2001-31.12.2005, 1.1.2006 alkaen Helsingin kaupungin tietokeskuksen TIEKEN johtaja) on edistänyt työssään korkeakoulujen ja työelämän kohtaamista. Culminatumin vuonna 2005 laatiman innovaatiostrategian ydin on uusien tietotaito-yhdistelmien synnyttäminen ja vahvistaminen yhdistelemällä julkishallinnon, yritysten ja korkeakoulujen parasta osaamista. Innovaatiostrategian julkilausuttuna painopisteena on luovan talouden edistäminen edistämällä kulttuuristen merkitysten huomioonottamista pääkaupunkiseudun asukkaiden toimintaympäristön suunnittelussa. Luova talous nähdään keinoksi asukkaiden hyvinvoinnin lisäämiseen.

## Tuotanto vaatii yhteiskehittelyä

*Lääkintöneuvos Sakari Lankisen<sup>13</sup> mukaan myös mielenterveyden ja jaksamisen ongelmat liittyvät nykyisin laajemmin koko yhteiskunnan kehitykseen ja työongelmien pohtiminen edellyttää yhteiskunnallista keskustelua. Kun yhteiskunnan eri alueet ovat uudella tavalla kytköksissä toisiinsa, tarvitaan eri yhteiskunnan sfäärit ylittävää mentorointia. Heidi Liehun mukaan on ongelma, että nykyisin yhteiskunnassa ei ole sellaista kollektiivista rakennetta, johon yksittäinen ihminen ongelmineen voisi tukeutua. Mentorointiprosessi voi olla yksi esimerkki lähimmäisyydestä, siitä että ihmiset kantavat vastuuta toinen toisistaan.*

Ei ole yllättävää, että käsite luova talous ja johtamisen uudet menetelmät ovat alkaneet kulkea tiiviisti käsi kädessä. Luovuuden johtaminen on Markku Wileniuksen mukaan kulttuuriosaamisen kolmas ulottuvuus. Luovien alojen johtajilta on luovan talouden kirjallisuudessa usein perätty vahvaa visionääristä, jopa karismaattista johtajuutta. Yhtä hyvin voidaan puhua toisenlaisista, verkostoyhteiskunnan edellyttämistä organisoimisen taidoista. Ne liittyvät väistämättä organisaatiokulttuuriin, kun toiminnan ydin on ihmisten välinen vuorovaikutus. Mosaiikkimainen ja diversiteettiin perustuva luova talous perustuu sekä osaamisen johtamiselle että eri alojen osaajien verkostoimiselle. Verkostojen johtamisen avaimena korostuvat ensimmäisenä luottamuksen rakentamisen kyvyt. Jotta uusia taiteellisen käsityöläistyön ja liiketoiminnan yhdistelmiä voidaan luoda, on saatava eri alojen osaajat työskentelemään yhteisten päämäärien hyväksi. Voikin olla, että luovan talouden johtaminen ei ensisijaisesti edellytäkään vahvaa karismaa ja yhteistä visiota<sup>14</sup>, vaan kykyä hienovaraisesti ymmärtää ja tukea monenlaisista toimintakulttuureista tulevia ihmisiä, kutakin hänen oman persoonansa edellyttämällä tavalla.

Verkostoillerakentuvaayhteiskuntaajatuotantoprosessiasitooperustavastiyhteenyhteiskehittelyn (co-configuration) käsite<sup>15</sup>. Yrjö Engeströmin mukaan yhteiskehittely on lähellä sellaista toimintaa kuin yhteistuotanto ja yhteisluominen, niissä kaikissa on kysymys tuotantoprosessiin kytkeytyvästä uutta luovasta toiminnasta. Yhteiskehittely käsitteenä viittaa jatkuvaan toimintaan, ”puuhasteluun” yhteisen kohteen äärellä. Yhteiskehittely onkin määritelty eri alojen ammattilaisten toiminnaksi, joka liittyy **pitkän elinkaaren tuotteeseen tai palveluun**. Yhteiskehittelyn kohteena oleva tuote tai

<sup>13</sup> Sosiaali- ja terveysministeriön lääkintöneuvos, psykiatrian erikoislääkäri Sakari Lankinen pyysi mentorikseen filosofian dosentin, feministin ja kirjailijan Heidi Liehun. Mentorin ja aktorin välissä keskustelua on tässä tulkittu Talouselämä-lehden mukaan.

<sup>14</sup> Genre- eli lajityyppiteoriassa on päädytty etsimään yhden, kaikkia vastaanottajia miellyttävän genren sijasta genrejä, jotka pystyvät houkuttelemaan yleisökseen useita erilaisia vastaanottajaryhmiä. Esimerkiksi hyvä Hollywood-elokuva tarjoaa useita päällekkäisiä genreja niin, että elokuva kykenee tavoittamaan riittävän suuren yleisön. Johtaminen työssä, jossa työprosessin organisointi liittyy merkitysten tuottamiseen, on merkityksiä luovien ja käsittelevien persoonallisuuksien johtamista ja johtamisen vaatimia valmiuksia kannattaa hakea merkitystuotannon alueelta.

<sup>15</sup> Käsitteen määrittelyssä on käytetty Yrjö Engeströmin kokoomateosta, jossa esitellään kehittävän työntutkimuksen viime vuosien lähestymistapoja. Tutkimus pyrkii uusilla tutkimusmenetelmillä haltuunottamaan uusia työn muotoja.

palvelu ei Engeströmin mukaan koskaan tule perinteiseen tapaan valmiiksi, sillä se on **adaptiivinen**, käyttäjän toimintaan sopeutuva. Siinä on tietoteknisin ratkaisuin luotua asiakasälykkyyttä, ja se vaatii jatkuvaa **uudelleenkonfigurointia käyttäjän, tuottajan ja tuotteen välisenä vuoropuheluna**. Merkitystaloudessa yhä useammat tuotteet ja palvelut ovat tällaisia sopeutuvia, pitkäkestoisia tai jatkuvasti muuntuvia tuotteita tai palvelukonsepteja, ja monialainen yhteiskehittely on tullut myös yhteiskunnallisten palvelujen tuotantoon. Kun tuotantoprosessi käännetään ylösalaisin niin, että kaiken päämääränä on asiakkaan tarpeisiin ja tilanteisiin vastaaminen, moniammatillisen asiakkaan tarpeista neuvottelemisen pitäisi nousta työtiimien toiminnan keskiöön.

*Mikko Bruunilla on itsellään pitkä kokemus toimittajana eri tyyppisestä merkitystuotannosta.<sup>16</sup> Työnohjauksessa hän on perehtynyt useisiin eri menetelmiin, esimerkiksi hahmoterapiaan, ryhmätyön menetelmiin, psykodraamaan, sosiadraamaan ja psykoterapiaan. Mikään yksittäinen menetelmä ei voi vastata kaikkiin työnohjausta koskeviin odotuksiin. Bruunin mukaan Yleisradio on nähnyt työnohjauksen tärkeyden. Hyvinvoiva päällikkö ymmärtää toimintakulttuuria ja ihmisiä ja johtaa hyvin, eikä oikein edes voida laskea sitä laskua, mikä organisaatiolle aiheutuu, jos päälliköt voivat huonosti.*

Aineettomien tuotteiden ja palvelujen tuottamiseen perustuva luova talous edellyttää yhteiskehittelyn taitoja, koska tuotannon kehityksessä on edetty vaiheeseen, jossa alkuperäiset käyttöarvoa omaavat tuotteet ovat jo olemassa, ja ainoa mahdollisuus edetä on rikastaa tuotteita edelleen lisäämällä niihin jatkuvasti uusia palveluita ja elämyksiä. Ainoa mahdollisuus luoda ja kerrosta tuotteisiin ja palveluihin jatkuvasti uusia merkityksiä on mennä jatkuvasti laajemmalle tai syvemmälle asiakkaan tarpeiden ymmärtämisessä ja merkitysten yhdistelemisessä. Luovan talouden asiakas- tai käyttäjälähtöisyys ja palveluiden konvergoituminen toisiinsa edellyttävät

1. aina uusien ja uudentyyppisten käyttäjäryhmien kutsumista mukaan yhteiskehittelyn prosessiin, jotta tuotteen kaikki käyttöarvot voidaan löytää ja niitä voidaan kehittää eteenpäin
2. entistä kommunikoivampien, tarkempien ja monipuolisempien dialogisten välineiden käyttöönottoa, jotta yhteisen kehittelyn kohteen mahdollisimman monipuolinen ja syvä ymmärtäminen mahdollistuu.

Yhteiskehittelyn ja luovan talouden yhteistä, jatkuvaan muutokseen perustuvaa toimintalogiikkaa kuvaa hyvin Yrjö Engeströmin ajatus työn muuttumisesta moniperspektiiviseksi. Adrian Cussis on esittänyt kognitiivisten polkujen teorian, jonka avainidea on perspektiiviriippuvuus. Teorian mukaan toimijoiden on mahdollista saavuttaa perspektiiviriippumattomuus muodostamalla maastoon vakiintuneiden polkujen verkosto. Jos samassa maastossa tapahtuu toiminnallisia muutoksia, vakiintunut verkosto muodostuu esteeksi ja se alkaa rajoittaa navigointia muuttuvassa maastossa. Yhteiskehittelyn prosessia

<sup>16</sup> Mikko Bruun aloitti alueradion toimittajana, oli pitkään radion uutistoimituksessa, sitten journalismin opettajana, journalismin lehtorina, UNESCO:n palveluksessa Nairobissa. 80-luvulla hän vieraili useissa eri oppilaitoksissa ja veti uutisten tietokoneistusprojektia sekä Suomessa että Ruotsissa. Tämän tyyppinen projektikeskeinen ja monipolvinen työura odottaa nykyisin media-alalle tulevia nuoria.

ja oppimista voidaan tarkastella juuri tällaisena verkostojen vakiinnuttamisena ja horjuttamisena, sulkemisena ja aukaisemisena. Aina uuden perspektiiviriippumattomuuden saavuttaminen edellyttää olemassa olevan verkon destabilisointia, eli järjestelmä on jatkuvassa liiketilassa. Yhteiskehittelyn prosessien tutkiminen on muodostuneiden polkujen empiiristä jäljittämistä.

On mahdollista, että yhteiskehittelyä ei omaksuta nopeasti vaan yhteiskehittelyn taitoihin kasvetaan sukupolvi sukupolvelta. Merkitystuotannon jäsentäminen työprosesseissa niin, että kaikille löytyy tilaa ja oma paikka merkityksen kehittelyn prosessissa, on vaativa taitolaji. Se vaatii osapuolilta paitsi laaja-alaista koko työ- tai tuotantoprosessin kulun ja päämäärien ymmärtämistä, myös luottamuksen ilmapiiriä.

*Ria Karhila kokee opiskelijat aloitteleviksi taiteilijakollegoikseen. Hän on nähnyt, että ammattikorkeakouluissa opiskelijat saavat paljon erilaisia valmiuksia ja samalla opiskelijat liukuvat opettajalta toiselle. Opiskelun jatkumoa pitävät koossa tutoropettajat, mutta lisäksi jokainen opiskelija tarvitsisi mielellään rinnalleen ammatissa toimivan aikuisen. Suhde ei ole yksipuolinen. Mentori pääsee jakamaan opiskelijoiden energialatausta, hän saa olla kehityksen etulinjassa, hän on etuoikeutettu kuulemaan haaveita ja unelmia ja jakamaan opiskelijoiden kanssa jotain elintärkeää.*

## Toimijat tekevät tarinan

Mentorointi nousi suuren kiinnostuksen kohteeksi Yhdysvalloissa 1970-luvulla sekä tutkimuskirjallisuudessa että populaarikirjallisuudessa. Keskustelu mentoroinnista oli alku tärkeälle ja laajalle ilmiölle, sillä 1970–80-luvuilla ohjaus vakiintui osaksi työelämän ja opiskelujen kehittämistä. Suomessa työelämän mentorointikirjallisuutta on ilmestynyt erityisesti 90-luvulla.

*Uudenmaan osaamiskeskuksen Culminatumin johtaja Eero Holstila kertoo, että hänen kokemuksensa mentorina toimimisesta ovat peräisin 1990-luvun lopusta ja julkishallinnosta. Ensimmäisen kokemuksen sanasta mentorointi hän sai, kun hän tuli kesälomalta työpaikalle ja siellä odotti lappu: ”Soita tähän numeroon. Kysymys on mentoroinnista.”*

Monet mentorointia käsittelevät kirjat ja artikkelit alkavat samalla tarinalla mentoroinnin alkuperästä. Kirjassa Mentoroinnin monet kasvot tarina kerrotaan näin (Juusela, Lillia ja Rinne 2000, 14):

Kreikkalaisen mytologian mukaan Ithakan kuningas Odysseus antoi poikansa Thelemakhoksen jumalatar Athenen hoiviin lähtiessään itse Troijan sotaan. Athene kätkeytyi Odysseuksen vanhan ystävän, Mentor-nimisen miehen hahmoon. Mentorin tehtävänä oli, Homeros kertoo, auttaa ja ohjata nuorukaista ja kasvattaa hänet siihen tehtävään, jonka hän oli saanut synnyinlahjakseen. Tarina kuvaa kreikkalaisten uskoa siihen, että tällainen nuoren ja seniorin välinen suhde pohjautuu ihmiskunnan säilymisen peruseriaatteeseen: ihminen oppii taitoja, tapoja ja arvoja suoraan sellaiselta henkilöltä, jota hän katsoo ylöspäin ja arvostaa.



Juusela, Lillia ja Rinne kertovat siis kirjassaan tutun mentoroinnin alkukuvan ja antavat sille tulkinnan. Heitä kiinnostaa, miksi naispuolinen Athene kätkeytyy miehen hahmoon. Yhtä hyvin voitaisiin kysyä, miksi jumalatar – joka kreikkalaisessa mytologiassa on ihmishahmoinen - uudelleen pukeutuu toisen ihmisen hahmoon, ja miksi hän valitsee roolihenkilökseen mentoroitavalle eli aktorille tutun hahmon. Miksi näyttää siltä, että mentorointitilanteessa jo sen syntymästä asti vallitsivat draaman olosuhteet? Mentoroinnin alkuunsaattavien tapahtumien monimutkainen kertomusmuoto, liikkuminen eri tapahtumien näyttämöillä ja siirtyminen draamasta epiikkaan, tuo jo sinänsä teoksen vastaanottoon useita kerroksia. Samalla itse kuva, tuttuun hahmoon pukeutuneen mentorin ilmestyminen aktoria kohtaamaan, on hyvin pelkistetty.

Työelämän mentoroinnin oppaissa mentorointi on toisaalta yhdistetty mestarin ja kisällin suhteeseen, toisaalta se on alusta asti haluttu nostaa puhtaasti ammatillisen tietojen ja taitojen välittämisen yläpuolelle. Mentoriksi valitaan johtajia, joiden toivotaan ikään kuin siirtävän ominaisuuksiaan seuraajalle, löytävän **aktorista piileviä kykyjä ja ominaisuuksia** ja kehittävän niitä. Esikuvina näyttävät korostuvan ammatit, joissa on edellytetty poikkeuksellisia, jopa jumalallisia taitoja. Juusela, Lillia ja Rinne viittaavat siihen, että erityisesti taitavat parantajat, arvostetut shamaanit ja lahjakkaat taiteilijat saivat siirtää yhteisön perimää, he kouluttivat työlleen seuraajia.

*Eero Holstilan mukaan mentorointi 90-luvun lopussa koski nimenomaan johtamista, ja mentoroinnin kautta etsittiin hiljaista tietoa, joka ei siirry formaalissa muodossa. Holstilan mukaan oli hyvä, että prosessi oli selvästi tavoitteellinen ja erittäin määrämuotoinen. Mentoroitavaa tavattiin työpaikalla kaksi tuntia kerran kuukaudessa vajaan vuoden ajan. Mentoroinnin alkaessa mentori tapasi aktorin esimiehen ja informoi tätä siitä, että mentorointiprosessi alkaa.*

Mentoroinnin opaskirjoissa viitataan siis toistuvasti ilmiöihin, jotka tekevät juuri nyt muutenkin tuloaan johtajuuteen. Organisaation johtamisen uudeksi välineeksi on nostettu **tarinat**. Tarinamuoto näyttää parhaiten edistävän työtapojen ja organisaatiokulttuurin siirtymistä organisaation jäseneltä toiselle. Alkukuva jumalattaresta, joka saa tehtävän, naamioituu ihmishahmoon ja saapuu näyttämölle aloittaakseen nuorukaisen koulutuksen, siirtyy siis luovassa taloudessa jälleen uusille johtamisen näyttämöille. Johtaminen ymmärretään yhä enemmän juuri luovuuden ja yhteiskehittelyn edistämiseksi, ja kulttuuriset merkitykset puetaan nekin kernaasti kulttuurisen välittymisen varhaisimpiin muotoihin.

Tarinoille on ominaista pelkistetty morfologia. Esimerkiksi Vladimir Propp nimesi venäläisistä kansansaduista löytyvät välttämättömät toimijat sankariksi, hänen vastustajakseen ja hänen auttajakseen ja neljäksi muuksi toimijaksi. Vielä yksinkertaisemmin tarinan myyttisen aktanttimallin hahmotti A. J. Greimas, jonka mukaan tarinan syvärakenteessa, toiminnan tasolla, tarinasta löytyy välttämättä vain neljä tekijää: subjekti, objekti, auttaja ja vastustaja.

## Ohjaus on kasvun matka

*Heidi Liehu ja Sakari Lankinen toteavat, että ajallemme on ominaista yksi asia. Ihmiset parveilevat elämänhallinnan seminaareissa. ”Ihmiset janoavat, että joku sanoo, miten pitäisi elää”.*

Mentorointi on liitetty toisellakin tavalla kasvamiseen, se liittyy tutkimustyön ohjaamiseen jatko-opiskeluvaiheessa. Tällöin mentoroinnissa korostetaan sen alkukuvan tapaan vieläkin selvemmin ohjattavan, aktorin, pitkää kasvuprosessia nuoresta aikuiseksi. Mentorointiin rakentuu tarina yhteisestä matkasta kohti tuntematonta. Korkean tason ohjauskertomuksena on pidetty jopa Danten Jumalaista näytelmää, jossa Vergilius, klassinen ohjaajahahmo, johdattaa suojattinsa helvetistä taivaaseen. Helena Aittola esittelee omassa tutkimuksessaan ohjauskirjallisuutta, jossa ihmisen kehitystä ei nähdä satunnaisiksi, vaan sille on asetettu tietty aikajärjestys ja suunta. Kasvuun on liitetty se, että ohjattava pystyy laajentamaan näköalojaan, asettamaan korkeita tavoitteita ja päämääriä ja jopa laajentamaan käsityksiään siitä, mikä on ihmiselle mahdollista.

Kaunokirjallisuudessa klassisen siirtymähenkilön tehtäväksi on asetettu valon suuntaaminen, merkkien tulkitseminen ja vaaroista varoittaminen. Opiskelijoiden ohjauksessa on korostettu, että ohjaaja ei pyri sopeuttamaan, auttamaan tai ymmärtämään ohjattavaa, vaan hän on tuki opiskelijan itsenäiselle ongelmanratkaisulle ja päätöksenteolle. Akateemisessa maailmassa ohjaustyöhön on liittynyt myös ennakkoluuloja ja esteitä, jotka ovat hidastaneet hyvien ohjauskäytäntöjen yleistymistä. Jatko-opiskelijat kokivat Aittolan tutkimuksen mukaan kuitenkin selvästi hyötyvänsä sopivasta ohjauksesta, ja edellyttivät ohjaukselta sekä ammatillisuutta että henkilökohtaisuutta.

*Ria Karhila kokee huimausta, jos hän ajattelee, että hänen pitäisi opettaa aloitteleville kollegoilleen jotain. Hänen opettamisensa on enemmänkin kokemuksen jakamista, kertomista, tarinoita omalta työsaralta, omista virheistä, epävarmuuksista ja onnistumisista. Hän kertoo, että ei ole lainkaan varma siitä, että kykenee opettamaan, mutta sen sijaan hän haluaa myötälää, ymmärtää ja kertoa mielipiteensä. Kyse on pitkälti keskinäisen suhteen ja luottamuksen syntymisestä ja toisaalta, jokaisessa työkokemuksessa tapahtuu jonkinlaista oppimista.*

Tutkimusten mukaan oppipoika-järjestelmään pääsy on ollut tyypillistä esimerkiksi Nobel-palkinnon saajien tutkimusuralle. Keskeisintä tällaisessa mentorointisuhteessa ei ole tietojen hankkiminen, vaan mahdollisuus nähdä läheltä, kuinka mestari toimii, ajattelee ja etenee tutkimustyössään. Ohjaussuhteen suurin hyöty on siinä, että ohjattavalle kehittyy laajempi tutkimuksellinen orientaatio, johon sisältyy kyky arvioida tutkimustyön laatua. Mentorin tehtäväksi asetuu myös vahvistaa ohjattaviensa arvoja, normeja ja minäkuvaa.

Jos mentorointi ymmärretään ohjattavan saattamiseksi läpi siirtymäriitin, ohjattavan matkaan kohti akateemista opinnäytettä voidaan yhdistää entistäkin värikkäämpiä kielikuvia. Siirtymävaiheelle ovat ominaisia älylliset kriisit, odottamattomat kilpailut, vihollisten kohtaaminen, emotionaaliset ristiriidat, epäonnistuminen ja mahdollisuudet itsensä pettämiseen. Ohjauskirjojen mukaan on surullista, että tieteellisiä jatko-opiskelijoita kuvaa tyypillisesti vakavuus, jopa synkkyys, vaikka mielen kehitys

ja luova tutkimustyö edellyttävät mielikuvitusrikkautta ja leikillisyyttä. Mentoroinnin tuominen opiskeluun voi parhaimmillaan tukea juuri luovuuden ja leikin säilyttämistä työprosessissa.

## Opastaja tulee ulkoa

*Mikko Bruun puhuu vähintään odotuksen ajan kestävästä prosesseista. Työnohjaussopimus tehdään työyhteisöjen kanssa vuodeksi kerrallaan. Jos johtaminen nähdään oman persoonan käyttämiseksi ja työnohjaus ammattilaisen identiteetin kehittämiseksi, työnohjaus vaatii säännöllisyyttä ja riittävästi aikaa. Silloin ainoa todellisen motivaation lähde on, että työntekijä haluaa työnohjaukseen vapaaehtoisesti. Miten kohtaan ihmisiä, miten kohtaan itseni – vasta näistä syntyy jaksaminen.*

Mentorointiin, työnohjaukseen ja opettamiseen liitetty seniorin ja nuoren tai mestarin ja hänen oppilaansa suhde voidaan siis hyvin pelkistää subjektin ja hänen auttajansa liitoksi, jossa onnistuminen näyttää tarinan logiikan mukaan edelleenkin vaativan jopa yliluonnollisia ulottuvuuksia, kuten onnistunutta henkilökemiaa. Toimijoiden suhteen rakentuminen edellyttää yhtä hyvin tarinoissa kuin mentorointikirjallisuudessa sellaisia tarinaan kuuluvia funktionaalisia tekoja kuin 1) valintaa, 2) sitoutumista ja 3) näiden kahden onnistumista vahvistavia rituaaleja kuten säännöllisiä tapaamisia.

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*Eero Holstila kertoo, että ainakin hänen tapauksessaan mentoroinnin käytännöt olivat sellaisia, että aktorit olivat mentorille täysin tuntemattomia. Hän itse, sosiologi, sai mentoroitavakseen kaksi täysin eri alan ihmistä.*

Hyvän mentorointisuhteen kulmakivet vertautuvat nekin hyvin klassisiin tarinoihin. Esimerkiksi metaforalla ”mentoroinnin epäselvät tavoitteet”, tai ”mentorin ja aktorin pitkät välimatkat” voidaan hyvin viitata tarinoissa esiintyvään matkaan, jonka sankari joutuu käymään läpi löytääkseen aarteen tai pelastaakseen yhteisön tuhoutumiselta. Metafora ”luottamuspula” liittyy toimijoiden välisiin epäselviin suhteisiin, joiden paljastuminen toiminnan kautta on usein tarinan ydinainesta. Mika Aaltonen ja Titi Heikkilä toteavat, että johtamisessa tarinoita käytetään pelkistämään asioiden välisiä suhteita ja tarinoiden avulla voidaan selkeyttää tarvittavien tekojen, toimenpiteiden ja tavoitteiden toteutumisen välinen yhteys.

Mentori näyttää siis olevan jo aivan alkukuvastaan lähtien erityisen valikoitumisprosessin ja erityisten laadullisten ominaisuuksiensa avulla löytyvä **uusi ja yllättävä henkilö**. Sekä pohjoisamerikkalaisessa että eurooppalaisessa suuntauksessa korostetaan, että mentori tulee oman työyhteisön ulkopuolelta. Luovan talouden olosuhteissa mentorointi on siis menetelmä, joka, toisin kuin valmentavaan johtamiseen ja esimerkiksi prosessijohtamiseen liitetty kehityskeskustelu, on jo alun perin rakennettu ja tarkoitettu organisaatorajojen ylittämiseen. Tämä näkyy myös toiminnalle asetetuissa päämäärissä, sillä mentorin etsiminen ja löytäminen voi kirjallisuuden mukaan johtaa myös siihen, että aktori rohkaistuu lähtemään pois nykyisestä työpaikastaan.

Yhteisessä matkassa kohti tuntematonta on kysymys klassisten tarinoiden ja taiteen toistuvasta perusasetelmasta, suostumisesta toisen johdattamiseen ja johdatetuksi tulemisesta. Matka-metaforassa näyttää korostuvan sana dia-logos, välissä oleva.<sup>17</sup> Mentorointi on siis eräänlainen välitila, johon näyttää välttämättä liittyvän kumppanuus ja valintojen mahdollisuus. Mentorointiin voi hyvin liittyä myös yhteiskunnallisten sfäärien ylittäminen, tieteen- ja taiteenalojen rajojen rikkominen, jota luova talous ja verkostoyhteiskunta edistävät ja edellyttävät.

## Dialogi syntyy dialogissa

*Eero Holstila toteaa, että mentorointia ei voi olla ilman, että kaksi henkilö tuo prosessiin oman elämäntilanteensa. Johtamiseen kuuluu management, joka sisältää johtamisen opeteltavissa olevat taidot, mutta aivan yhtä olennaisena leadership, johon kuuluvat ihmissuhdetaidot ja hiljainen tieto. Vain käymällä läpi persoonan kannalta aivan perustavia elämänhallinnan asioita, ajankäytön hallintaa ja keskittymisen ja oravanpyörästä pois pääsemisen keinoja päästään hiljaisen tiedon äärelle, ja vasta sitä kautta myös johtamisen käytännöt avautuvat uudella tavalla.*

145 Mentorointiprosessissa kaksi täysin eri työyhteisöstä, organisaatiokulttuurista ja erityyppisestä ammatista tulevaa henkilöä tulee yhteiselle näyttämölle ja esittää siellä yhteisen esityksen, tutustuu toistensa työtapoihin. Prosessi muistuttaa läheisesti Engeströmin kuvaamaa yhteiskehittelyyn perustuvan työn prosessia, jossa monimutkaistuvassa, taloutta, palveluita ja luovaa työtä uudella tavalla yhdistävässä mosaiikkimaisessa yhteiskunnassa yritetään jatkuvasti hahmottaa ja haltuunottaa **koordinaation, kooperaation ja kommunikaation** kautta uusia yhteisen toiminnan kohteita.

*Ria Karhila pitää opettamisen onnellisina hetkinä hetkiä, jolloin opiskelija itse löytää oman persoonallisen tapansa tehdä. Se tarkoittaa, että opiskelija löytää oman äänensä vuorovaikutuksessa ja oman pelottomuutensa kaiken epävarmuuden keskellä. Kukaan ei voi käydä oppimisen tietä toisen puolesta. Toimittajan ja ohjaajan työtä ei voi oppia, ellei ole jonkinlaista kykyä heittäytyä alitajunnan vietäväksi, ellei opi epäonnistumaan, ellei kuuntele kriittisesti ennen kaikkea opettajia. Olisi helppoa, jos voisi oppia vain muiden virheistä, mutta eniten opettavat omat virheet.*

Mentoroinnissa, työnohjauksessa ja opettamisessa pyritään käsittelemään ja välittämään hiljaista tietoa. Hiljaisella tiedolla on viitattu organisaation työprosessien kulkuun liittyvään implisiittiseen tietoon, jota ei (vielä) osata artikuloida ja siirtää toisille. Hiljainen tieto on persoonallista ja kontekstiin sidottua, ja sen sanoittaminen, ulkoistaminen abstrakteiksi käsitteiksi ja numeroiksi on hankalaa. Helpommin tiedon sanoittaminen onnistuu, jos käytetään metaforia ja analogioita. Ikujiro Nonaka kuitenkin korostaa, että hiljainen tieto on vieläkin syvemmillä, se on tietoa, joka ei ole suoraan imitoitavissa, matkittavissa prosessista ja organisaatiosta toiseen.

<sup>17</sup> Esimerkiksi Inkeri Sava on yhdistänyt dialogin, matkan ja taiteen tekemisen. Matka on edelleen esimerkiksi kaunokirjallisuuden suosituimpia teemoja.

Hiljainen tieto on tyypillistä nimenomaan käsityöläisen työssä, joka liittyy kiinteästi kokemukseen, tekniikkaan ja työn välineisiin. Voidaan ajatella, että juuri hiljainen tieto on ollut sitä erinomaisuutta, jolle koko käsityö ja sen arvontuotanto perustuu. Käsityössä hiljainen tieto kumuloituu kaiken aikaa tekijöille, sillä käsityöläinen pyrkii jatkuvasti luomaan uusia, ainutlaatuisia ratkaisuja suhteessa asiakkaaseen, tuotteeseen, prosessiin sekä tapaan käyttää työn välineitä. Myös Pirkko Anttila on yhdistänyt käsitteen hiljainen tieto nimenomaan käsityöläisammatteihin ja puhunut sen yhteydessä erityisestä taito-tiedosta, jonka englanninkielinen vastine on practical knowledge. Samalla taito-tieto täyttää Anttilan mielestä hiljaisen tiedon ilmaisullisen ulottuvuuden. Voidaan puhua tekijän persoonallisesta käsialasta ja käyttää englanninkielistä termiä personal knowledge. Hiljainen tieto on taitajan, osaajan tietoa, joka on yhteydessä tekijän käsialaan, eikä sen siirtäminen sellaisenaan toiseen yritykseen tuottaisi välttämättä edes tuloksia.<sup>18</sup>

*Ria Karhila sai yhden opiskelijansa harjoittelujaksiksi työtoverikseen. Toinen opiskelija taas tuli valmistuttuaan tekemään entisen opettajansa kanssa yhteistä viikoittaista sarjaa. Tällaisessa tilanteessa opiskelijasta tulee työtoveri, sillä myös häneltä odotetaan mielipiteitä, panosta ja ilmapiirin muokkaamista. Keveän ja mukavan tekemisen on säilyttävä, vaikka tunnit painavat päälle ja kaikki ei suju hyvin.*

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Martin Buber määrittelee dialogin suhteeksi, jossa syntyy tasaveroisuus Minän ja Sinän välille vastakohtana suhteelle, jossa toinen alistetaan Sen asemaan. Mentorointiin kuuluu ajatus, että dialogi mahdollistaa hiljaisen tiedon siirtymisen. Shustermanin pragmatistisen estetiikan lähtökohdasta voidaan muotoilla, että dialogi on toiminnan näyttämö, paikka jossa itseilmaisuus on mahdollista. Dialogi on turvallinen, tasa-arvoinen suhde, jossa merkitysten muodostaminen tulee mahdolliseksi. Kohtaamisen kieli on ainakin jollakin tasolla ”yhteistä” ja ymmärrettävää, ja hiljaista tietoa on edes mahdollista esittää toiselle persoonalle, joka myöskin esittää omaa hiljaista tietoaan.

Mihail Bahtin rakentaa jo alun perin dialogin teoriansa kertomuksen rakenteisiin ja draaman näyttämölle. Hän pitää modernin dialogisen romaanin edeltäjänä sokraattisia dialogeja ja menippolaisia satiireja. Jo sokraattisesta dialogista löytyy Bahtinin mukaan sellaisia kerronnan keinoja kuin synkrisis eli erilaisten näkökulmien rinnastus ja anakrisis eli puhumaan provosointi. Jo sokraattisessa dialogissa sankarit esittävät erilaisia näkökulmia maailmaan. Totuuden ja inhimillisen ajattelun luonne esitetään dialogiseksi ja ideoita koetellaan dialogisesti. Bahtinin mukaan filosofisen näytelmän henkilö, Sokrates, saa kysymyksillään ihmiset paljastamaan hiljaista tietoaan eli vielä jäsentymättömiä ideoitaan. Kohtaamisen paikoiksi Sokrates rakentaa toiminnan näyttämöitä, joissa kaksi laajaa maailmankatsomuksellista järjestelmää saavat puhua itsestään omilla kielillään ja samalla ne asettuvat rinnakkain koettelemaan toisiaan.

*Eero Holstilan kokemusten mukaan mentorointi oli ehdottomasti kaksisuuntainen prosessi. Mentorointi aktivoi oman johtamisen analyysia, ja se taas kehittää omaa toimintaa.*

<sup>18</sup> Katso käsityön luonteesta myös Volanen 2005.

Bahtinin polyfoninen maailma, jonka hän löytää Dostojevskin romaaneista, pakenee monologisen maailman kategorioita. Dialogi on hänelle itseisarvo, ilman sitä yksilön subjektiutta ei voi olla olemassa. Bahtinin mukaan Dostojevskin romaaneissa sankarit siis käyvät dialogia keskenään, mutta yhtä hyvin sankarit käyvät päättymätöntä dialogia myös itsensä kautta muokaten jatkuvasti identiteettiään. Lopulta dialogi tunkeutuu romaanin jokaiseen sanaan ja tekee siitä kaksiaänisen. Dialogisen maailman ihmiset ovat sisäisesti ehtymättömiä juuri siksi, että he eivät koskaan antaudu määriteltäviksi, he eivät ole joutumassa Sen asemaan. ”Vieraita tietoisuuksia ei voida tarkastella, analysoida ja määritellä objekteiksi, olioiksi. Niitä voi vain puhutella dialogisesti. Niiden ajattelemisen merkitsee niiden kanssa puhumista, muuten ne kääntävät meille objekteiksi muutetun puolensa.” (Bahtin 1991, 106)

### Toivon estetiikka avaa suunnan

*Eero Holstila ei pidä mentorointiprosessia innovaatioiden luomisen paikkana. Hänen mukaansa innovaatioille on enemmänkin ominaista, että ne syntyvät yllätyksellisesti. Holstilan kokemuksen mukaan mentorointi on ennen kaikkea tukirakenne, joka pitää yllä itseluottamusta ja turvallisuutta. Kun yksilölle syntyy perusturvallisuus, hän uskaltaa myös ottaa suurempia riskejä työssään.*

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Voidaan siis ajatella, että Bahtinin polyfonisen maailman sisäisesti ehtymättömät toimijat ovat jatkuvasti näyttämöllä, draaman ajassa, oman tulemisensa tilassa ja olennaista niissä on vain suunta, johon ne ovat juuri nyt kehkeytymässä. Mutta vasta dialogiin ryhtyminen, suun avaaminen ja toisen repliikkiin vastaaminen avaa yksittäiselle toimijalle suunnan, johon hän on kehkeytymässä. Näyttämöllä dialogiin osallistuvien näyttelijöiden toiminnan suunta paljastuu vain yksi repliikki kerrallaan, ja jokainen vastaus toisen repliikkiin voi kääntää toiminnan suunnan.

*Ria Karhila pitää itseään solmujen avaajana, pulmatilanteiden rauhallisena ratkaisijana ja eteenpäin menon varmistajana. Jos opiskelija ei saa olla rohkea, riskitön työ tuottaa vain keskinkertaista ohjelmaa.*

Luova talous yhdellä tavalla määriteltynä voi tarkoittaa merkitysten tulvaa. Pragmatistinen estetiikka ja draaman teoria eivät kuitenkaan ole kiinnostuneita vain siitä, miltä meitä ympäröivä yhteiskunta näyttää. Tärkeintä on se, miten **ihminen yhteiskunnassa toimii ja selviytyy**. Luova talous ja yhteiskehittelyyn perustuva työ edellyttävät uudenlaista toimijaa, ihmistä, joka on oman elämänsä subjekti.

Luovan talouden ja yhteiskehittelyn mahdollisuuksien äärellä elävä ihminen on täydestä syystä toiveikas ihminen, sillä hänen ympärillään näyttää avautuvan äärettömästi valinnan vaihtoehtoja, ja hän voi tehdä loputtomasti löytöjä aina uusien aineettomien arvojen valtamerestä. Dialogin estetiikka ei kuitenkaan ole mosaiikkimaista kaikkialle levittäytyvien rajattomien mahdollisuuksien, tulvan ja diversiviteetin estetiikkaa. Jo mentoroinnin alkukuvassa dialogin mahdollisuudet ovat upeita, koska ne ovat rajattuja, ne näyttäytyvät dialogin itsensä rajaamina.



Dialogin estetiikka on suunnan löytämistä. Dialogi on voi olla esiintymistä **vain yhdelle kerrallaan, vastaamista vain yhteen ääneen kerrallaan, kehkeytymistä vain yhteen suuntaan kerrallaan**. Dialogin toivo, uusi esteettinen kokemus, on läsnä yhdessä eteenpäin vievässä valinnan vaihtoehdossa kerrallaan. Jokainen uusi repliikki sisältää toivon. Toivo on siinä, että elämällä on suunta ja se kehittyy.

*Sakari Lankinen löysi mentoroinnin tavoitteiksi elämänviisauden, ystävyys ja tasavertaisuuden. Heidi Liehu toteaa, että keskustelun virittämiseen kuuluu, että heitetään ilmaan jotain, johon toinen reagoi.*

Taiteen tekemisessä ja tutkimuksessa dialogin ja matkan mahdollisuuksista kirjoitetaan samalla tavoin toivon näkökulmasta. Löytäminen ja harhailu, pysähtyminen ja liike, tiede ja taide, valinnan täysi rauha ja valintojen meri ovat läsnä yhtä aikaa. ”Toistemme karttoihin tutustumalla voimme tiedostaa erilaisten tieverkostojen olemassaolon ja nähdä, että vakuuttavasti perusteltuna yksikään kulkusuunta ei sulkeudu pysyvästi.”<sup>19</sup>

*Mikko Bruunin mukaan työnohjauksella etsitään aidosti läsnä olevaa ihmistä, joka uskaltaa esittää aidosti omia ajatuksiaan. Jos ihminen on aito, se suojaa häntä epäeettisiltä ratkaisuilta. Toisista voi tulla työnohjauksessa raketteja, ammatilliset päämäärät ja motiivit selkiytyvät prosessin aikana. Toiset ottavat uusia työtapoja työyhteisöön, esimerkiksi vetäytymisen pois työpaikalta kaksi kertaa vuodessa. Syntyy ihmissuhdeverkostoja, työnohjauksessa olleet toimivat vuosia toistensa vertaistukena ja soittelevat toisilleen.*

Verkostoyhteiskunnan muuttuminen toivon merkityksiä luovaksi taloudeksi edellyttää läsnäolon hetkiä. Työnohjaus ja mentorointi ovat myös tulevaisuuden yhteiskunnan keinoja tukea työn tekijää. Hyvä työnohjaaja tai mentori voi tulevaisuudessa löytyä paitsi oman työyhteisön ulkopuolelta, myös kokonaan toiselta tietämisen tai taitamisen alueelta, tieteestä tai taiteesta. Oleellista on, että ohjaaja on itse kohtaamiseen sitoutunut persoona. Tämän lisäksi hänen on tunnettava yhteiskehittelyyn perustuvan työn ja kulttuuristen merkitysten tuotantoon perustuvan työn tekemisen vaatimukset.

<sup>19</sup> Räsänen 2003, 183. Taiteen tekemistä ja sen tutkimista käsittelevä teos Kohtaamisia. Taiteen ja tutkimisen maastossa sisältää useita artikkeleita dialogista ja yhteisestä matkasta.

## Aineistot:

- Kehittämispäällikkö (Yleisradio, radiotoiminta) Mikko Bruunin haastattelu Yleisradiossa 20.4.2005
- Culminatumin toimitusjohtaja Eero Holstilan haastattelu Innopolissa Espoossa 7.4.2005
- Ohjaaja-toimittaja Ria Karhilan sähköposti 20.4.2005
- Porttinen, Katri (2005). Me puhumme onnesta. Mentorointi. Artikkelit lehdessä Talouselämä 11, 24.3.2005, 67-68.

## Kirjallisuus

- Aaltonen, M. & Heikkilä, T. 2003. Tarinoiden voima. Miten yritykset hyödyntävät tarinoita? Jyväskylä: Gummerus.
- Adorno, T. & Horkheimer M. 2005. Kulttuuriteollisuus. Valistusjoukkohuijauksena. Tiedotustutkimus 27 (4-5), 9-37.
- 149 Aittola, H. 1995. Tutkimustyön ohjaus ja ohjaussuhteet tieteellisessä jatkokoulutuksessa. Jyväskylä studies in education, psychology and social research 111. Jyväskylä: Jyväskylän yliopisto.
- Altman, R. 2002. Elokuva ja genre. Tampere: Vastapaino.
- Ammond, J. 2002. Eino Krohn. Teoksessa Kuisma, Oiva (toim.). Suomalainen estetiikka 1900-luvulla. Suomalaisen kirjallisuuden Seura. Tietolipas 184. Jyväskylä: Gummerus, 113-161.
- Anttila, P. 2004. Tiedonhankinnan kanavat ammatillisen asiantuntijuuden edistäjinä. Teoksessa Kotila, Hannu,
- Mutanen A. (toim.) 2004. Tutkiva ja kehittävä ammattikorkeakoulu. Helsinki: Edita, 128-160.
- Bahtin M. 1991. Dostojevskin poetiikan ongelmia. Helsinki: Kustannus Oy Orient Express.
- Broms, H. 1984. Alkukuvien jäljillä. Kulttuurin semiotikkaa. Helsinki, Juva: WSOY.
- Buber, M. 1993. Minä ja Sinä. Juva: WSOY.
- Cussins, A. 1992. Content, embodiment and objectivity: The theory of cognitive trails. Mind 101, 651-688.
- Dewey, J. 1987. Art as Experience. Carbondale: Southern Illinois University Press.
- Engeström, R. 1999. Toiminnan moniäänisyys. Tutkimus lääkärinterventojen keskusteluista. Helsinki: Helsinki University Press.

- Engeström, Y. 2004. Ekspansiivinen oppiminen ja yhteiskehittely työssä. Tampere: Vastapaino.
- Engeström, Y. 1995. Learning by expanding: An-activity-theoretical approach to developmental work research.. Helsinki: Orienta-Konsultit.
- Engeström, Y., Miettinen, R. & Punamäki, R. 1999. Perspectives on Activity Theory. Learning in doing: social, cognitive and computational perspectives. Cambridge: Cambridge University.
- Greimas, A. J. 1980. Strukturaalista semantiikkaa. Suom. E. Tarasti.. Helsinki: Gaudeamus.
- Huhtala, H. 2004. The Emancipated Worker? A Foucauldian Study of Powe, Subjectivity and Organising in the Information Age. Commentationes Scientiarum Socialium 64. Saarijärvi: Finnish Society of Sciences and Letters.
- Juusela T., Lillia T. & Rinne J. 2000. Mentoroinnin monet kasvot. Jyväskylä: Yrityskirjat Oy.
- Juuti, P. 2005. Toivon johtaminen. Aavaranta-sarja. Keuruu: Otava.
- Keski-Luopa, L. 2001. Työnohjaus vai superviisaus. Työnohjausprosessin filosofisten ja kehityopsykologisten perusteiden tarkastelua. Oulu: Metanoia-instituutti.
- 150 Nonaka, I. & Takeuchi, H. 1995. The knowledge-creating company: How Japanese companies create the dynamics of innovation. New York, Oxford: Oxford University Press.
- Polanyi, M. 1966. The tacid dimension. London: Routledge & Kegan Paul.
- Propp, V. 1928/1977. Morphology of the folktale. Austin, London: University of Texas.
- Reitala H. & Heinonen T. 2001. Dramatisoitua todellisuutta. Teoksessa Reitala, H. & Heinonen T. Dramaturgioita. Näkökulmia draamateorian, dramaturgian ja draama-analyysin ongelmiin. Saarijärvi: Palmenia-kustannus, 9-74.
- Räsänen, M. 2003. Kirjeitä sinisestä hatusta. Teoksessa Varto, J., Saarnivaara, M. ja Tervahattu H. (toim.). Kohtaamisia taiteen ja tutkimisen maastoissa. Artefakta 13. Hamina: Akatiimi Oy, 174-183.
- Sava, I. 1998. Taiteen ja tieteen kietoutuminen tutkimuksessa. Teoksessa Bardy, M. (toim.). Taide tiedon lähteenä. Stakes julkaisut. Jyväskylä: Atena Kustannus Oy, 103-121.
- Shusterman, R. 2000. Performing live. Aesthetic alternatives for the ends of art. Ithaca, London: Cornell University Press.
- Shusterman, R. 2001. Taide, elämä ja estetiikka. Pragmatistinen filosofia ja estetiikka. Tampere: Gaudeamus
- Toivonen V-M. & Asikainen R. 2004. Yrityksen hiljainen osaaminen. Kehittämisen uusi taso. Helsinki: Mielikirjat.

- Valpola A. 2003. Kehityskeskustelun mahdollisuudet. Helsinki: WSOY.
- Victor, B. & Boynton, A. 1998. Invented here. Maximizing your organization's growth and profitability. A practical guide to transforming work. Boston Mass.: Harvard Business School Press.
- Virkkunen, J. 2002. Konseptien kehittäminen osaamisen johtamisen haasteena. Teoksessa Virkkunen, Jaakko (toim.). Osaamisen johtaminen muutoksessa. Ideoita ja kokemuksia toisen sukupolven knowledge managementin kehittelyyn.. Työelämän kehittämisohjelma, raportteja 20. Helsinki: Painopörssi Oy, 11-49.
- Volanen, M. V. 2005. Käsiyöläistyö työn kehittämisen metodologisena peilinä. Ammattikasvatuksen aikakauskirja 7 ( 1), 12-23.
- Wilenius, M. 2004. Luovaan talouteen. Kulttuuriosaaminen tulevaisuuden voimavarana. Helsinki: Edita

Susanna Kivelä

## **Yritys ja rock-musiikki yritysten rock-kilpailua markkinoivan julkaisun valossa**

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### **Abstract**

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The objective of this presentation is to develop a preliminary understanding of the Finnish CompanyRock competition as a phenomenon. Basically, the Finnish CompanyRock competition is seen as a forum that temporarily combines art and business. The pre-understanding is sought in a dialogue between the empirical and the theoretical. Texts in the marketing material from the year 2006 competition were analyzed with a view to find an appropriate concept for the special features of the phenomenon.

The theoretical background of this presentation is based on the concept of transgression. Transgression, namely, symbolic inversion, can be defined as any act or behavior which inverts or in some way presents an alternative to commonly held values and norms. Where the Company stands for rational, serious and abstract, Rock is understood to represent the emotional, physical, and visual.

It has been argued that the boundaries between business, art and culture have vanished. According to the empirical evidence, the Finnish CompanyRock competition can be seen and studied as a forum of temporary inversion and liberation from the established or expected order. The company's temporary inversion from serious to something liberal and boisterous becomes emphasized. The visual aspects of the competition as well as the rockin' and rollin' stress the physical and sensory aspects of the company. Even though the cooperation and interaction between business, art and culture are increasing and boundaries somehow vanishing, the experience of the inversion of symbolic boundaries creates important opportunities for renewal.

## Johdanto

Tässä suppeassa esityksessä tarkastellaan sitä, miten taiteen ja yritys-elämän vuorovaikutus näyttäytyy yritysten rock -kilpailua markkinoivassa julkaisussa. Esitys pyrkii osaltaan rakentamaan esiyymmärrystä käynnistyvän väitöskirjatutkimuksen tutkimussuunnitelman pohjaksi.

Hirsjärvi ja Hurme (1980, 13) jakavat näkemykset tutkimuksen pyrkimyksistä kahteen ryhmään: niihin, jotka korostavat lainalaisuuksia ja säännönmukaisuuksia ja niihin, jotka pyrkivät ilmiöiden ymmärrettäväksi tekemiseen. Näistä edellinen liittyy positivistiseen ja jälkimmäinen hermeneuttiseen tutkimusotteeseen.

Tutkimus voi olla luonteeltaan oppimisprosessi, jossa havainnot, refleктоiva ajattelu, käsitteellistäminen ja käsitteiden koettelu seuraavat toisiaan. Olennaista on, että eri vaiheet avaavat uusia näkökulmia tarkasteltavaan ilmiöön. Ensivaiheessa rock-kilpailun ominaislaadusta pyritään luomaan esiyymmärrystä tutkimalla millä tavoin kilpailu ja tapahtuma kuvataan kilpailun markkinoin tijulkaisussa.

Käsite ohjaa tapaamme ymmärtää maailmaa (Leppihalme 2006, 54) ja toisaalta käsitteellisellä ajattelulla yritetään Ilkka Tuomen (2003, 28) mukaan myös luoda järjestystä maailmaan. Markkinointiaineiston tarkastelua on inspiroinut transgression käsite. Transgression taustalta on mahdollista löytää luokitteluun ja rajoihin liittyvää ajattelua. Luokittelu ja rajat puolestaan esiintyvät sekä tarkasteltavassa aineistossa että taiteen ja muun maailman vuorovaikutusta tarkastelevassa keskustelussa laajemminkin. Tavoitteena on pohtia voisiko transgressio tehdä näkyväksi jotain sellaista, mikä on ominaista tarkasteltavalle ilmiölle. Käsitteiden lainaaminen ja soveltaminen uusille alueille, ilman riittävää perehtyneisyyttä, sisältää riskejä (Leppihalme 2006, 55). Tässä esityksessä kysytään, onko tarkoituksenmukaista pitää transgressio-käsitettä mukana tutkimussuunnitelmaa rakennettaessa.

## Luokittelu, rajat ja rajattomuus

FirmaRock -kilpailu toteutettiin ensimmäistä kertaa vuonna 2004, jolloin tapahtumaan osallistui 25 yritystä. Vuonna 2005 osallistujamäärä oli kasvanut jo 40 yritykseen ja alkukarsintoja toteutettiin kaikkiaan kahdeksalla paikkakunnalla. Kysymyksessä on yrityskilpailu, joka etenee alueellisista alkukarsintojen ja semifinaalin kautta finaaliin. Kilpailuun osallistuu yrityksen työntekijöistä koottu bändi, jossa on korkeintaan 7 jäsentä (joista vähintään 40 % yrityksen työntekijöitä). Kahdesta semifinaalista 12 parasta firmarock-bändiä pääsee loppukilpailuun. FirmaRockin tuomaristo arvioi esityksiä seuraavin kriteerein: musiikillinen osaaminen 50 %, esiintymisen ilo ja heittäytyminen 20 %, yhtyeen toimiminen kokonaisuutena 10 %, visuaalisuus 10 %, kappalevalinta 10 % sekä yrityksen yhteishenki 10 %



Yritysten rock -kilpailussa yhdistyvät taiteellinen luovuus ja yrityselämä. Richard Florida (2005, 295) kuvaa luovaa luokkaa esitellessään taiteen ja yrityselämän vuorovaikutusta muun muassa seuraavasti:

”..sen lisäksi, että he olivat huippuluokan harrastajamuusikoita, he olivat suostuneet ottamaan soittimensa mukaan talouselämän huippukokoukseen ja esiintymään kollegoilleen. Korkeakulttuuri ja kansankulttuuri, vaihtoehtoisuus ja valtavirta, työ ja huvi, pääjohtaja ja jazzdiggari ovat kaikki sulautumassa yhteen. Kysymyksessä on suuri sulauma, evoluutioprosessi, joka pääsi alulle tietyillä suotuisilla erityisalueilla ja joka leviää hiljalleen koko yhteiskuntaan.”

Levanto, Naukkarinen ja Vihma (2005) toteavatkin, että raja taiteen ja muun maailman välillä on häviämässä. Kun taiteeseen liittyviä piirteitä liitetään osaksi muuta toimintaa, halutaan usein korostaa taiteeseen liittyvää vapautta, yksilöllisyyttä ja ilmaisuvoimaa. (Naukkarinen 2005, 27)

Näkemykset rajojen katoamisesta eivät silti ole täysin ristiriidattomia. Mm. Nordström & Ridderstråle (1999, 110) toteavat toisaalta perinteisten raja-aitojen ja jaotteluiden murenevan ja kaikkinaisten luokitteluiden kuuluvan vanhaan maailmaan ja toisaalta he (1999, 116) puhuvat myös uusheimolaisuudesta, identiteetistä, joka rakentuu muiden kuin perinteisten luokitteluiden varaan. Juha Varto samoin (2000, 4) toteaa, että rajattaminen ei ole erikseen löydettävä menetelmä vaan se on aina läsnä ja syntyy eron kokemuksesta. Samalle kannalle vaikuttaisi kallistuvan myös Saarnivaara (2003, 12) katsoessaan, ettei sellaista vaihtoehtoa ole, kuin siirtyminen tilaan, jossa ei ole rajoja. Rajojen ylitys mentaalisenä, psyykkisenä tai sosiaalisena ilmiönä tarkoittaa ylittymisen lisäksi rajan siirtymistä uuteen paikkaan.

Itse olen päättänyt valita luokittelun, rajat sekä siitä seuraavan ”rajankäynnin” näkökulmaksi, jonka kautta haluan kokeilla kohdeilmiöni tarkastelua.

## Yli siirtyminen, transgressio

Stallybrass & White (1986) tarkastelevat jo kaksikymmentä vuotta vanhassa teoksessaan transgressiota, yli siirtymistä, hyödyntäen keskeisesti Bahtinin neljäkymmentä vuotta sitten julkaisemaa *François Rebelais: keskiajan ja renessanssin nauru* -teosta. Transgressioon ja sen taustalla olevaan ajatteluun on kuitenkin palattu uudelleen mm. Marjatta Saarnivaaran artikkelissa ”Kohtaamisia maastossa – lähtökohtien teoreettinen tarkastelu” (2005) sekä Juha Varton artikkelissa ”Rajattaminen ja rajalliset. Fragmentteja teemasta” (2000). Itse asiassa Inkeri Savan toimittaman Taideteollisen korkeakoulun työpaperin F 9 teema on Rajattajat ja rajojen ylittäjät.

Luokittelu on seurausta pyrkimyksestä tiivistää ilmiön luonne rajaamalla ulos asiaan kuulumattomat piirteet. Poissulkeminen on välttämätöntä identiteetin rakentamisen kannalta (Stallybrass & White 1986, 191). Luokittelu ja rajat luovat dynamiikan, jossa poissuljettu, rajantakainen, muuttuu poissulkemisen kautta vetovoimaiseksi (Stallybrass & White 1986, 191). Dynamiikka pakottaa

määrittelemään rajoja aina uudelleen ja uudelleen (vrt. Varto 2000 ja Stallybrass & White 1986, 191). Transgressio tarkoittaa sellaista ylisiirtymistä, joka rikkoo jotain kirjoittamatonta sääntöä tai vastakkainasettelua (Saarnivaara 2003, 12). Stallybrass & White tarkastelevat transgressiota symbolisena ylösalaisin kääntämisenä. Symbolinen transgressio voi olla mikä tahansa teko tai toiminta joka kääntää ylösalaisin, rikkoo, kumoaa tai muutoin esittää vaihtoehdon vallitseville arvoille tai normeille (1986, 17).

## Aineiston tarkastelu

Yritän nyt tarkastella sitä, miten FirmaRock ilmiönä kuvataan vuoden 2006 kilpailua markkinoivassa mainosjulkaisussa. Markkinointijulkaisun tekstit muodostuvat kilpailun järjestäjien teksteistä sekä viiden kilpailuun aikaisemmin osallistuneen yrityksen haastatteluista tai valmiista teksteistä sekä neljän kilpailun yhteistyökumppanin haastattelusta tai valmiista teksteistä. Voi ajatella, että nämä kokemusten kuvaukset toimivat pohjana sille miten uudet kilpailuun osallistuvat ymmärtävät kilpailun luonteen.

155 Hahmottelen aineistoa sisältöanalyysin avulla tuomalla esille ilmiötä kuvaavat ydinsanat ja ilmaisut (Eskola, Suoranta 2000, 169). Analyysin pohjalta FirmaRock -tapahtumaa luonnehtivat seuraavat näkökulmat ja käsitteet:

- imago
- rekrytoinnin helpottuminen
- huomionarvo ja näkyvyys
- yhteishenki, me-henki, työhyvinvointi
- hauskuus
- musiikki, rock
- innostus
- kurttuotsaisuuden katoaminen
- kyseenalaistaminen
- positiivinen asenne
- hyvä meininki
- kilpailu
- uudet kontaktit ja verkostot
- visuaalisuus
- luova ympäristö
- yhteinen päämäärä
- kunnia ja maine

Luonnehdinnoissa korostetaan 1) kokemusta ja elämystä: hauskuus, asenne, rock sekä 2) vaikutuksia ja seurauksia: näkyvyys ja maine sekä yhteishengen vahvistuminen. Kuvauksen perusteella kysymyksessä voi ajatella olevan uudistavan tapahtuman.

Transgressio voi ilmetä (Stallybrass & White 1986, 193 ja Saarnivaara 2003, 18) 1) sulautumisena ja integroitumisena, jolloin syntyy hybridejä tiloja ja muotoja tai 2) vallitsevien käsitysten ja normien murtumisena hetkellisesti ja tilapäisesti niin, että olemassa oleva luokittelu säilyy.

Firmaan ja rock:iin liitetään luonnostaan lähes vastakkaiset mielikuvat. Rock on musiikin tyyliä, jota esimerkiksi Wikipedian mukaan luonnehtii ”rockin perusasenne – vauhdikkuus, räväkyys ja tiukka yhteys nuorisokulttuuriin” (<http://www.wikipedia.org>). Yrityksen voi ymmärtää tarkoittavan ”yhden tai useamman henkilön yhdessä harjoittamaa taloudellista toimintaa, joka tähtää kannattavaan tulokseen”. (<http://www.stat.fi>) Käsitteenä FirmaRock voisikin olla eräänlainen käsitehybridi. FirmaRock on yritys kilpailu ja FirmaRock on rock-kilpailu. Saarnivaara toteaa, että hybridi voidaan ymmärtää oppositioiden välisenä rajatilana, sekä – että -tilana, joka mahdollistaa uudenlaisen järjestyksen ajatella ja toimia (2003, 18). Tällöin ”*Uskalletaan kyseenalaistaa se pinttynyt käsitys, että yrityksen pitäisi aina käyttäytyä ja näyttäytyä arvokkaasti sekä vakaasti. Tai se, ”että oikeus rokin ränkytykseen ei muka kuuluisi meille kaikille”. Tai, että ”..yrityksen on osattava jättää skraga naukaan ja heittää rokkivaihe päälle.*”

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Hetkellinen transgressio on yläpuolella – alapuolella -olevan symbolisen rajan tilapäistä yliastumista. Karnevalistinen transgressio tarjoaa ”yläpuolella olevalle” tilapäisen vapautumisen ja toisin näkemisen foorumin (Saarnivaara 2003, 14 – 15). Yritysten rock -kilpailu näyttäisi luovan edellytyksiä myös hetkellisen yliastumisen tavoitteiden saavuttamiselle. Hetkellinen transgressio:

- 1) Ylläpitää mielikuvaa yhteisöstä heterogeenisena ja rajattomana kokonaisuutena (Stallybrass & White 1986, 10), jossa ”*kisa on tuonut yhteen erilaisia ihmisiä, joilla on ollut sama päämäärä*” ja jossa ”*ei ole toimitusjohtajia tai varastomiehiä vaan raudankovia muusikoita*”.
- 2) Tarjoaa koomisten elementtien kautta hetkellisen vastavoiman virallisen ja vallitsevan kulttuurin painostavalle vakavuudelle (Stallybrass & White 1986, 10): ”*Kyllähän siinä tuli hauska yhdessä tekemisen meininki, kun suunniteltiin bändilogo, fanituotteet sun muut maksimaaliseen kannatukseen tarvittavat lirpakteet ja härpäkkeit*”.
- 3) Antaa aineellisen muodon yhteisön henkisille sosiaalisille rakenteille (Stallybrass & White 1986, 10): ”*ja polvea maahan siinä kitarasoolossa*”, ”*visuaalisuudella esityksen antama vaikutelma paranee*”.

## Päätelmiä

Tämän esityksen tavoitteena oli selvittää tuoko transgression käsite jotain lisäarvoa yritysten rock-kilpailun tarkasteluun. Vaikka rajat liike-elämän ja taiteen ja kulttuurin välillä ovatkin hapertuneet, on rajojen kohtaamisella tapahtumana itseisarvo. Transgression käsite tekee näkyväksi erityisesti sellaisen vuorovaikutuksen, jossa liikutaan aistimellisuuden suunnassa. Tällaiset hetkelliset ylösalaisin kääntämisen paikat ovat kiinnostavia liike-elämän näkökulmasta. Liisa Välikangas on todennut, että taide voi toimia luovuuden johtamisessa oppimiskokemuksena.

## Lähteet:

- Eskola, J. & Suoranta, J. 2000. Johdatus laadulliseen tutkimukseen. Jyväskylä: Gummerus
- Florida, R. 2005. Luovan luokan esiinmarssi. Helsinki: Talentum
- Hisjärvi, S. & Remes, P. & Sajavaara, P. 2000. Tutki ja kirjoita. Helsinki: Kustannusosakeyhtiö Tammi.
- 157 Leppihalme, I. 2006. ”Käsite koetukselle?” Sisältöliiketoiminta-alan käsitteiden kriittistä reflektointia. Teoksessa Inkinen, S. & Karkulehto, S. & Mäenpää, M. & Timonen, E. (toim.) 2006. Minne matka luova talous? s. 53 – 75. Jyväskylä: Gummerus
- Levanto, Y. & Naukkarinen, O. & Vihma, S. (toim.) 2005. Taiteistuminen. Helsinki: F.G. Lönnberg
- Naukkarinen, O. 2005. Taiteistumisen muodot. Teoksessa Levanto, Y. & Naukkarinen, O. & Vihma, S. (toim.) 2005. Taiteistuminen. s. 9 – 36. Helsinki: F.G. Lönnberg
- Nordström, K. & Riddeerstråle, J. 1999. Funky Business. Pelin henki – käytä päätäsi. Jyväskylä: Gummerus
- Saarnivaara, M. Kohtaamisia maastossa – lähtökohtien teoreettinen paikantaminen. 2003. Teoksessa Varto, J. & Saarnivaara, M. & Tervahattu, H. (toim.) Kohtaamisia taiteen ja tutkimisen maastossa. s. 12 - 23. Nurmijärvi: AKATIIMI Oy
- Stallybrass, P. & White, A. 1986. The politics and poetics of transgression. London: Methuen
- Tuomi, I. 2003. Todellisuuden virtuaalisuudesta. Teoksessa Varto, J. & Saarnivaara, M. & Tervahattu, H. (toim.) Kohtaamisia taiteen ja tutkimisen maastossa. s. 26 - 31. Nurmijärvi: AKATIIMI Oy
- Vallo, H. & Häyrinen, E. 2003. Tapahtuma on tilaisuus. Helsinki: Hakapaino
- Varto, J. 2000. Rajattaminen ja rajalliset. Fragmentteja teemasta. Teoksessa I. Sava (toim.) Rajoilla 1 – Rajattajat ja rajojen ylittäjät. s. 3 – 8) Taideteollisen korkeakoulun julkaisusarja F 9

<http://www.wikipedia.org/wiki/rock>

<http://www.stat.fi/meta/kas/yritys.html>

