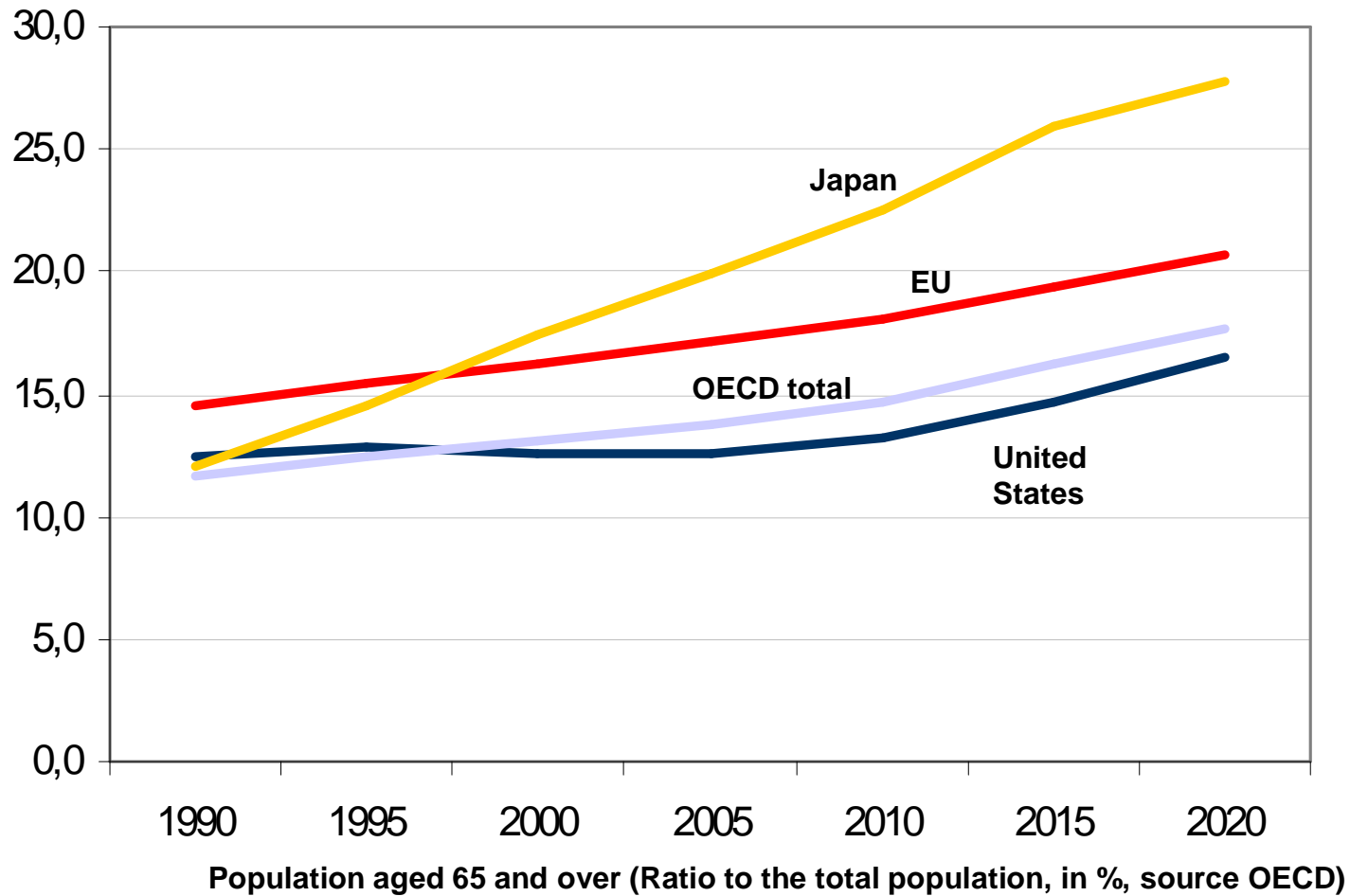


Facilitating Creativity to Transform the Experience of Ageing through Mediating Technologies

Harry Daniels
CSAT
University of Bath

Across major industrial countries, populations are ageing



Wilson, R.S. et al 2007 Loneliness and Risk of Alzheimer Disease Arch Gen Psychiatry. 2007;64:234-240

- People who are lonely are twice as likely to develop Alzheimer's disease,
- It may be that loneliness may affect systems in the brain dealing with cognition and memory, making lonely people more vulnerable to effects of age-related decline in neural pathways,
- <http://news.bbc.co.uk/1/hi/6332883.stm>

SOCIAL ISOLATION

- Social isolation occurs when an individual is cut off from social ties and activities
- At some point, many older adults will experience social isolation and feelings of loneliness due to changes in networks, physical access and sensory impairment
- Social isolation or loneliness has many negative consequences on health and mental health.

Belongingness

- that “human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive and significant interpersonal relationships.” (Baumeister & Leary, 1995).
- “there is a need for frequent, affectively pleasant interactions with a few other people” and the premise that “these interactions must take place in the context of a temporally stable and enduring framework of affective concern for each other’s welfare.” (Baumeister & Leary, 1995).
- Baumeister, R. F., Leary, M.R. (1995). The need to belong: desire for interpersonal attachments is a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.

Social cultural features of ageing

- lack of interpersonal relationships, absence of social support, social exclusion or social isolation are linked to a range of negative health outcomes.
- both psychological well-being and physical health via disregulation of physiological mechanisms including immune regulation.
- Negative impacts on physical health have been evidenced in the form of acute infections and in exacerbation of underlying chronic conditions.

Dementia in the UK

- 2008 estimated 700,000 people with dementia
- 2021 rise of 38% to just over 1,700,000
- 68% over 80
- 62% Alzheimer's disease
- 66.5% live in the community
- 36.5% in care homes
- 36% of estimated £18 billion costs of care borne by families
- No cure -it helps to understand dementia as a disability

The social definition of disability:

- Disability is a highly varied and complex condition with a range of implications for social identity and behavior.
- Disability largely depends upon the context and is a consequence of discrimination, prejudice and exclusion.
- Emphasizes the shortcomings in the environment and in many organized activities in society, for example on information, communication and education, which prevent persons with disabilities from participating on equal terms.

The social model of disability:

- Whilst disabled people may have medical conditions which hamper them and which may or may not require medical treatment, human knowledge, technology and collective resources are already such that their physical or mental impairments need not prevent them from being able to live perfectly good lives.
- It is society's unwillingness to employ these means to altering itself that causes their disabilities.

(Rieser and Mason 1992)

The Human Rights definition of disability:

- There is a growing realization to elaborate a definition of disability, which is in conformity with human rights values and principles
- In the heart of human rights mission lies the respect for variation in human cultures and the recognition that people are different on several considerations such as gender, race and disability.
- Nevertheless, concerning their rights and dignity all people are same but it does not imply that all people should be treated in the same or similar way.

Activities and Participation within Disability Definitions

- **Activity** is the execution of a task or action by an individual
- **Participation** is involvement in a life situation
- **Activity limitations** are difficulties an individual may have in executing activities
- **Participation restrictions** are problems an individual may experience in involvement in life situations

Hypothesis - Meeting the need to belong through creative activity will improve health and well being.

- Benefits include improved health outcome as measured by
 - 1) Increase in social support e.g. via social map;
 - 2) increased self esteem, reduced anxiety, depression;
 - 3) increased physical health outcomes, reduced medical symptoms – measure via GP visits, medication

ICT in support of older people...

- **At Work**
 - Staying active and productive for longer
 - Better quality of work and work-life balance
- **In the Community**
 - Overcoming isolation & loneliness
 - Keeping up social networks
 - Accessing public services
- **At Home**
 - Better quality of life for longer
 - Independence, autonomy and dignity

aims

- to investigate, assess and initiate mediating interventions to enhance creative practices to increase social inclusion and promote lifelong health and wellbeing.
- cross-disciplinary research collaboration focused upon understanding and influencing how quality of life, health and wellbeing are affected by, and can be improved through greater social inclusion and increased creative activity throughout life.

starting position

- contributory factors and influences on health and wellbeing arise from social alienation and decreased opportunities for engaging in a range of creative activities.
- Contributory factors and influences include important socio-cultural, psychological and biological factors.
- the quality of the design of socio-cultural, technological and built environments has a significant impact on all of these factors.

cross-disciplinary research team

- that engages with professional practitioners, and public groups in order to develop understanding, deliver practical solutions.
- Understanding how to overcome social isolation and the development of practical solutions will arise as a result of integrated cross-disciplinary, cross-sectional and longitudinal studies.
- envisaged outcomes will include improvements in lifelong health and wellbeing through overcoming social inclusion and increasing individual and collaborative creative activities and practices.

- the different contexts in which loneliness and isolation occur,
- the different foci of potential interventions,
- the design, development and assessment of mediating technologies to increase socially inclusive creative practices,
- the identification of useful and reliable measures and indicators of the different outcomes that arise and can be sustained.

Intervention Studies: DWR

- The study proposed here will theorise transformations of the social situation of elderly people and investigate the learning processes and outcomes achieved in the development of enhanced social inclusion and well being through the introduction of new technologies into everyday settings

Challenge to DWR

- DWR intervention with underprivileged, marginalized and silenced groups of people –
- Need to continue to develop techniques which avoid the dangers of paternalistic manipulation

Creativity: Vygotsky

- Tools
and
- Contexts
- Visible or invisible technologies
- Connecting with past activities and persons

Platforms for the support of social interaction and human communication

- new technological platforms for social interaction and the sharing of creative content are developing rapidly,
- only a limited understanding has been built of how to design and implement these complex systems, and the support they can provide for social aspects of creativity.
- how these platforms provide structure that supports *creative social interaction to the benefit of health and wellbeing in the aged and the less able*

- Fischer argues that the social science notions of *communities of practice and communities of interest* are central to social creativity, and that spatial, temporal, technological and conceptual *distances* can be overcome through support
- Becker's 'Art Worlds' provides a *sociological analysis* of the activities and types of cooperation necessary in art production, including the reliance on and development of conventions, and the shifting nature of roles and distribution channels [
- Shneiderman's GENEX framework envisages *increasing creativity in society* through cycles of collecting relevant information, relating to peers and creating and donating the results [28].
- Lessig described the digital world as closer to the world of ideas than the world of things, highlighting essential *differences between physical and digital objects* that affect behaviour and requirements for creativity support

Intention / wish list

- Interfaces to this digital world are still evolving to support effective exploration and contribution:
- Social networking sites, specialist forums for every domain, open-source software development, creative commons licences and platforms for the dissemination of user-generated content are the initial developments in response to a widely available, high bandwidth Internet.
- We wish to address how existing computer systems facilitate creative social interactions, and how and where new systems could be effectively engineered and deployed.

computers and the software used by creative practitioners

- designed almost entirely with *individual* users in mind.
- often hides the process of creation from others, which in turn could hinder *social and collaborative interactions* that researchers have argued are essential for the spread of new ideas, education and the evolution of creative domains [
- The power of computer networks and the need to understand social, cultural and experiential aspects of computer use in design has become clear.
- *This research will provide knowledge and understanding that can be applied in the development of the next generation of technological support for creative activities, focused on supporting interactions between humans through computers.*

Collaborative work aspects of technology - (CSCW) community

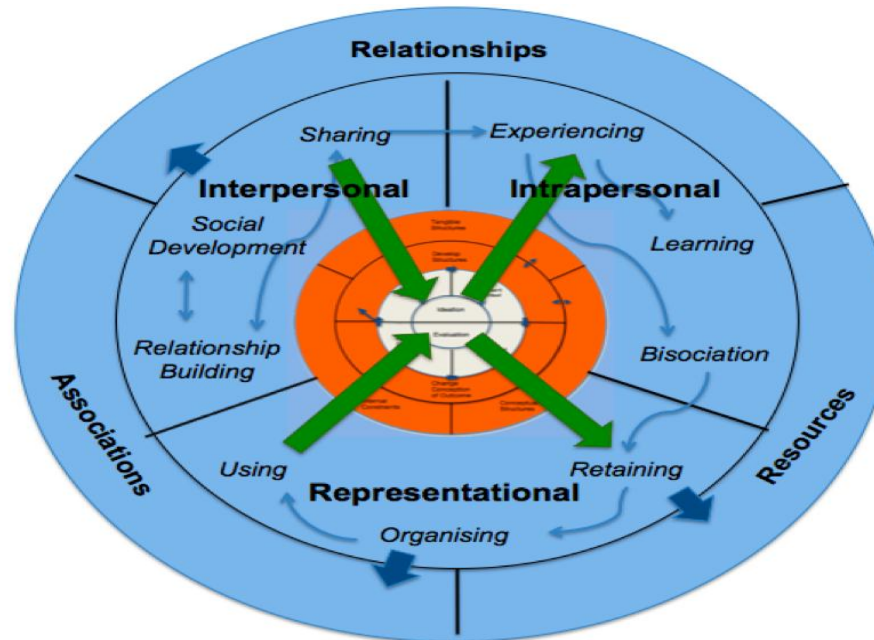
- Pinelle et al's 'Mechanics of Collaboration' building blocks of collaborative interaction in general
- provides a starting point for defining a set of mechanics that underlie creative social interaction
- Fischer argues that: "Social creativity does not necessitate the development of environments in which the interests of the many inevitably supersede those of the individual"
- *This research will analyse the benefits of creative communities to individual members in order to leverage these aspects in design, developing systems that encourage participation and attain critical mass.*

face-to-face and computer-based interactions

- *Place and physical proximity* clearly influence social interaction - design of technologies to support creative communities requires consideration of this issue.
- Hindmarsh et al analysed the difficulties found in object-focused human interaction in virtual environments, finding that awareness of the peripheral actions and perspectives of others was often impaired.
- *Peripheral awareness and ad-hoc encounters* are key to the value of institutions such as arts centres, since not only the outcomes but also the processes of creative activity and the evolution of ideas are visible to other practitioners.
- The visibility of creative processes can support inspiration, learning, and finding or developing complementary goals, skills or processes.
- pervasive computing is integrating technology further into the architecture of public and community settings.
- *This research will provide a basis through which both computer systems that support co-located communities, and systems that build connections between distant communities can be improved, and how the benefits of these systems can be maximised.*

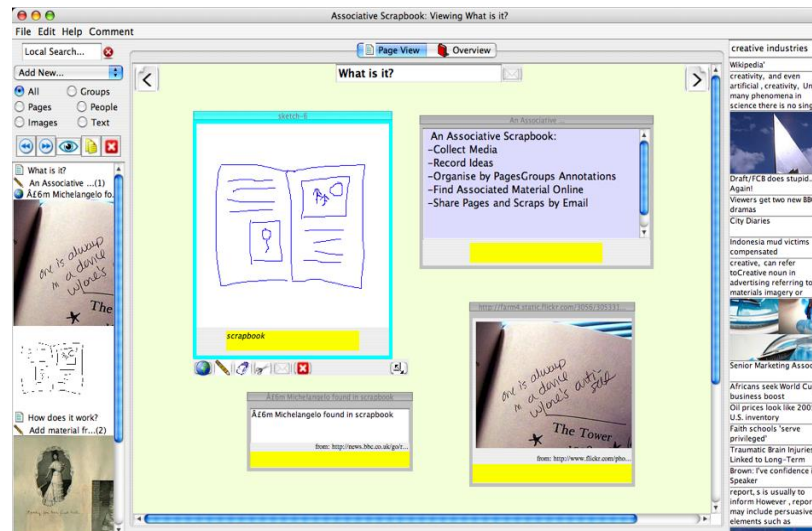
Model of Longitudinal Interaction, with relationships to Structural and Productive Interaction

intrapersonal – experiences, learning and bisociation, *representational* – the retention, organisation and use of ideas, structures and inspirational materials, *interpersonal* – building of collaborative and supportive relationships, Representational process result in collection of *resources* and *the association* between these. Interpersonal processes result in collaborative *relationships*



Associative Scrapbook

- Less domain specific –supports interdisciplinary dialogue
- Web association panel provides active/passive finding of new or related material
- Can share “scraps” or whole book.

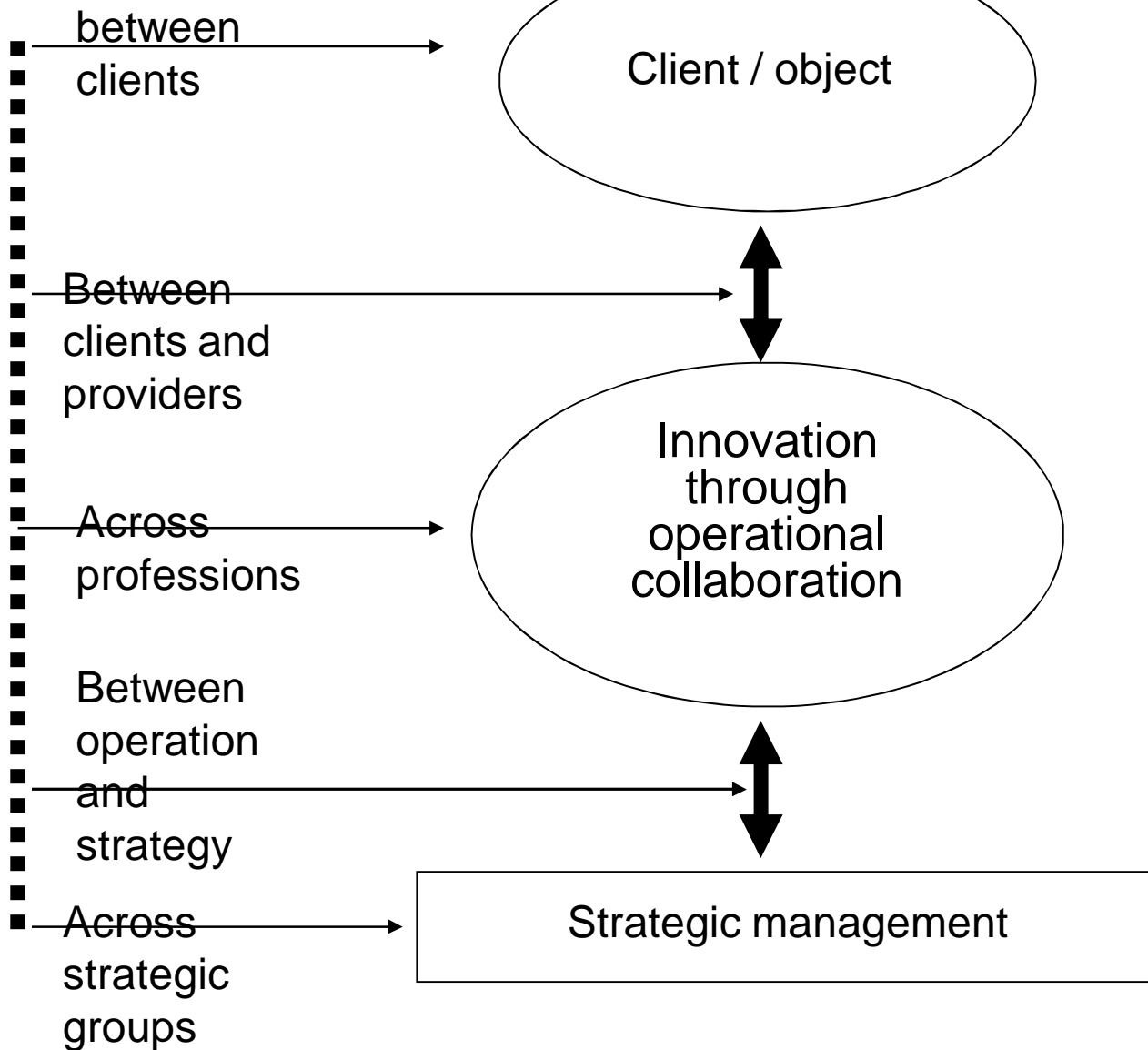


Four Research Themes

1. the ***contexts*** in which social exclusion and lack of opportunity for creativity occur;
2. the nature of ***interventions*** to increase social and creative practices;
3. the ***mediating technologies*** used to support the interventions; and
4. the ***outcomes*** in terms of health and wellbeing improvements arising from increased creativity and social inclusion.

Address those factors particular to: people in the ***home***, as members of ***communities*** and in ***institutions***.

ICT may facilitate activity



Twin related outcomes

- better service processes
- better outcomes for clients

Collaborative activity does the 'work'

ict as tools that enable / facilitate that work

Points of intervention and their inter-relation

