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User-centred design, e-research, and adaptive capacity in cultural institutions: the case of the Women on Farms Gathering (WoFG) collection

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On Communities…

- **The butterfly effect**
  - *"It has been said that something as small as the flutter of a butterfly's wings can ultimately cause a typhoon halfway around the world – Chaos Theory"*

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On Communities…

- **Inter-connectivity of matter, of which mankind act as catalysts who are also influenced by matter itself**

  "We know of no people without names, no languages or cultures in which some manner of distinctions between self and other, we and they, are not made… Self-knowledge – always a construction no matter how much it feels like a discovery – is never altogether separable from claims to be known in specific ways by others."
  (Calhoun c.f. Castells, 2003)

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Overview

- **Goals**
  - The case of a Women on Farms Gathering (WoFG) collection: a digital approach to developing a collection using storytelling
  - Through the interplay of user-centred design (UCD) principles and participative action research
  - Demonstration of the potential of using ICT to facilitate e-research, and reflexive adaptation in cultural institutions

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Defining cultural institutions…

- **Cultural institutions are organisations that promote and support culture, education, and sciences**
- **Typically, this includes:**
  - libraries,
  - museums,
  - public broadcasters,
  - and print media such as newspapers.

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Cultivating the knowledge commons

- **Museums and the protection of the commons**
  - By serving communities by preserving resources that seek to define those communities, facilitate relationships within the communities, and making resources free from market constraints
- **'Tragedy' of the commons: Hardin (1968)**
- **The case of the Museum's partnership with the WoFG in overcoming the 'tragedy'**
  - Voluntary ownership of resources in the commons by community
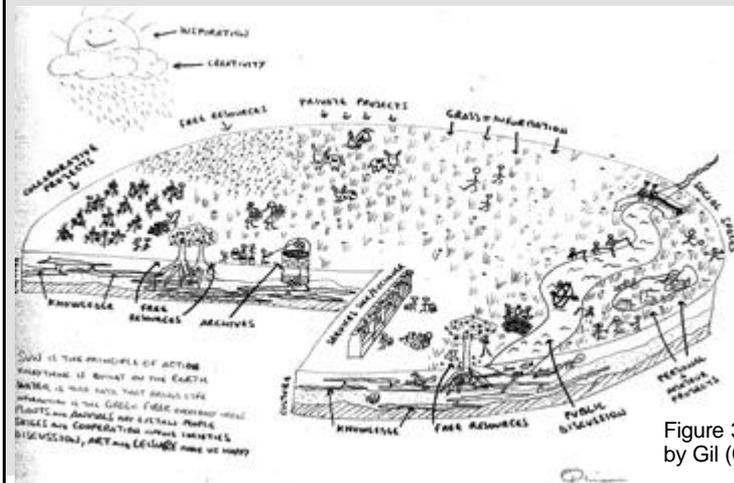 - Museum as a neutral and central entity in ensuring the sustainability of resources

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The Commons

Figure 3: The Commons by Gil (Claude, 2002)

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Overview

- **Community-based partnership**
  - Dynamic relationship between Museum Victoria (MV), the Women on Farms Gathering (WoFG) community, and the Faculties of Arts (FA/MU) and IT (FIT/MU) in Monash University
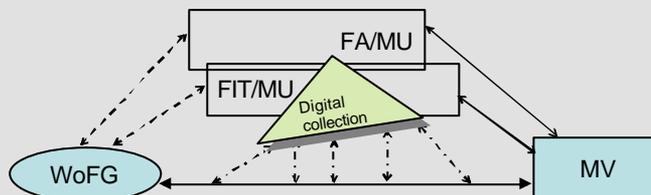
  - Digital collection as a focus in the dynamic relationships between MV, the WoFG community, and researchers from MU.

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The WoFG Collection

- **Background**
  - 1990: Gathering in Warragul
  - 2001: Gathering in Beechworth.Construction of history boards using items from past gatherings – increasing awareness of collection's significance
  - Led to partnership with Museum Victoria
  - 2003: Agreement between MV and WoFG Heritage Group
  - 2005: Researchers from MU (Faculties of Arts/IT) proposed project to further develop the collection using storytelling and oral history as focus

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The WoFG Collection

- **Collection items relating to the lives of Victorian farm women:**
  - Large banners,
  - videos,
  - photographs,
  - oral histories,
  - memorial plaque,
  - memorabilia (t-shirts, mugs, bags),
  - uniforms and
  - symbolic icons such as a cow pat and irrigation shovel, magic wand, cheque, Mallee stone, Mallee root, peaked cap, computer motherboard, a jar of Mallee soil and seeds, farm work boot, horseshoe, spring, ceramic hands and an open lock and key.

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The Digital Collection and Its Dynamics

- **Need for a holistic framework to take into account convergence of people, media, use, and so on**
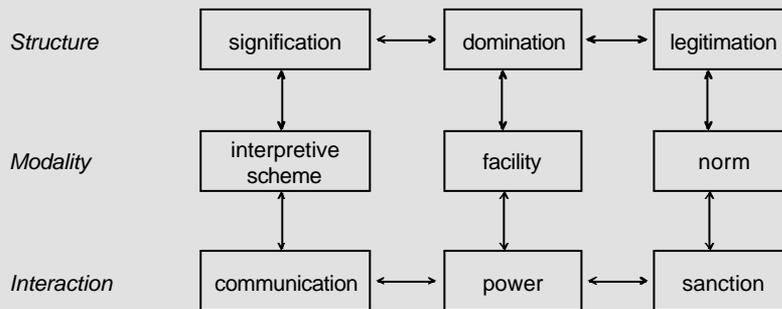- **This is explored using structuration theory (Giddens, 1984)**

Structure	signification ↔	domination ↔	legitimation
Modality	interpretive scheme	facility	norm
Interaction	communication ↔	power ↔	sanction

Figure 1: Dimensions of the duality of structure (Giddens, 1984)

- **Recognising that man actively change the world as it shapes him.**

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The Digital Collection and Its Dynamics

- **Recursive nature of technology based on structuration theory is reflected in the structurational properties of technologies as being created and changed by human action; but also used by humans to accomplish actions.**
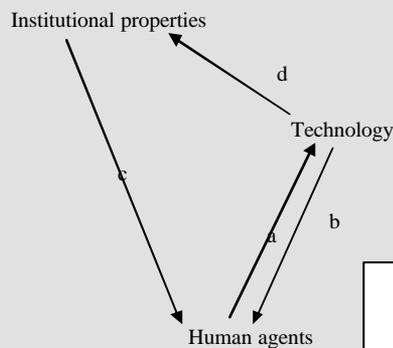
Institutional properties

d

Technology

Figure 2: Structurational model of technology (Orlikowoski, 1992)

c

a   b

Human agents

a	technology as a product of human agency
b	technology as a medium of human action
c	institutional conditions of interaction with technology
d	institutional consequences of interaction with technology

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A community-based design approach

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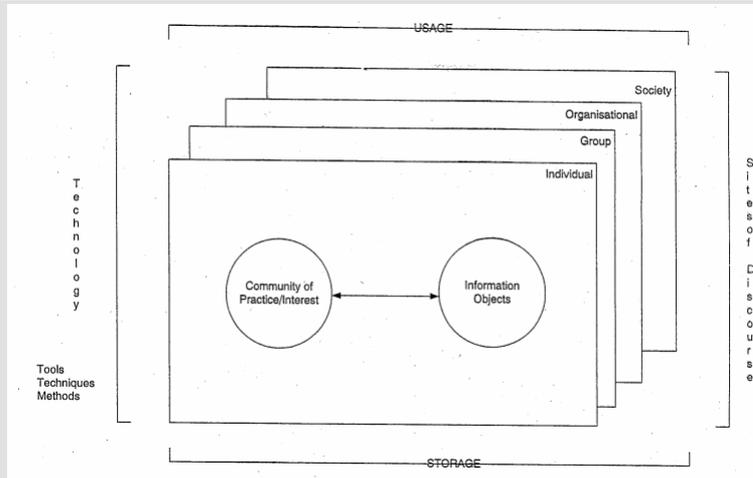
Developing the collection

- **Growth of the collection led to a need to exhibit the culture and history of the community to the public**
- **Involvement of Museum as a cultural institution kept in equal engagement – a neutral negotiation for the commons**
- **Design of the digital collection was based on participatory action research principles informed by structuration theory**
- **Aims of the digital collection were emerged through discussions with community representatives**

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A Community-Based Design Methodology

- **Gathering of user requirements done through discussions and meetings with the community**
- **Rationale for this:**
  - 'Users' were seen as co-producers than end users
  - The production and reproduction of cultures were assessed through the study of people working together
  - Balance of power: a transposition of the user from object to actor in the design process

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Outcomes

- **Resulted in an interactive digital collection using storytelling to exhibit the community's unique characteristic**
- **Participatory engagement between Museum and community led to enhancing the adaptive capacity of the information system for this interaction**
- **Implications for e-research**
  - Action-research tool enabled researchers and community to contribute knowledge across diverse locations
  - Repository enabled collaborative sharing of resources and integrated discussions

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Outcomes

- **Negotiations of boundaries within the commons both empowers and impose sanctions on community**
- **Sanctions defining accessibility and structures of collection**
- **Boundaries – a negotiation of place for the community with the Museum, partners, and other influences**
- **Understanding is reclaimed through negotiation – cultivation of identity and establishing citizenship for community**

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Outcomes

- **Responses reflect a reclaiming of identity and understanding in the community, and in the process extend its citizenship to people beyond the usual community. [View example]**
- **Reclamation an empowering and constraining effect on collective memories.**
- **Communications for the signification of common resources. [View example]**
- **Leading to developing a knowledge commons through:**
  - Construction of meanings via stories and resources
  - Signification and revealing knowledge via communication and interactions
  - Access of the digital collection; the process eliciting this outcome lies in the dynamic interaction between members of the community.
  - Levels of power demonstrated by interaction are manifested by facilities used to allocate resources → producing and reproducing structures of domination
- **Gathering example**

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Ongoing and Future Work

- **Extending the study to other cultural institutions, such as libraries and public broadcasting agencies**
- **Further developments in the collection:**
  - Signification of resources and their interfaces
  - Visualisations
  - Geospatial representations and annotations

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