'No longer possible to simply continue along previous lines'
Cultivating flexible,
transversal engagement
in intersecting processes
of social, environmental & scientific
change

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http://bit.ly/GGHS2014

"I made the wrong turn 30 years ago"

How can we reduce our vulnerability to staying too long with our chosen path of research?

"We couldn't know how this technology would be used, so I pulled back."

Two ideals:

flexible engagement & transversal engagement

Three vignettes:

socio-environmental studies
social studies of mental illness
social studies of scientific knowledge

-> alternative path from Latour (1987):
More vignettes—interdisciplinary workshops
etc. for "refractive practice"
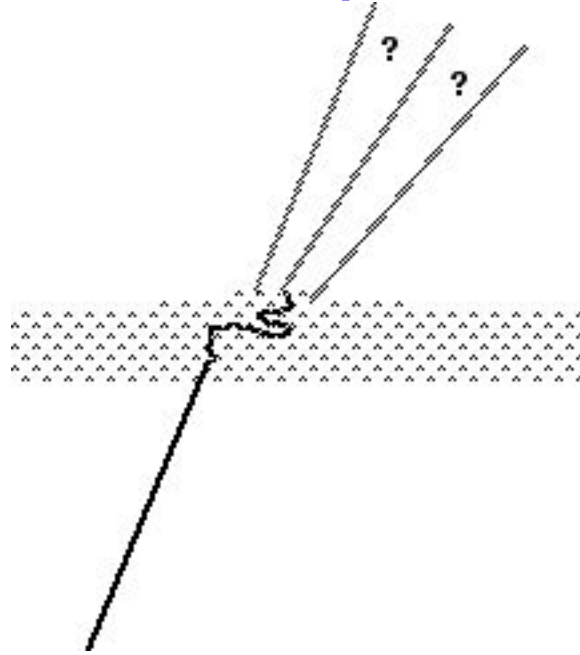
refractive practice

refractive practice

Principle 1:

Participants always bring a lot of knowledge about the topic of the session -> allow that to be brought to surface & acknowledged.

Principle 2:

What you really learn from a workshop or participatory experience is what you integrate with your own concerns.

refractive practice

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Guided Freewriting (What I think or feel about the possibility that I may stay too long with my chosen path of research is...)

Share one idea with a neighbor

Vignette 1:
Intersecting Processes
socio-environmental studies

Raúl García Barrios . Luis García Barrios
Elena Álvarez-Buylla

Lagunas
deterioro ambiental
y tecnológico en el
campo semiproletarizado

Changes in

political-economics, environment, population
health & science

can be seen as the outcome of *intersecting
processes*
    operating across different spatial and
    temporal scales,
        transgressing the boundaries of the
        situation under consideration &
            restructuring its "internal" dynamics.

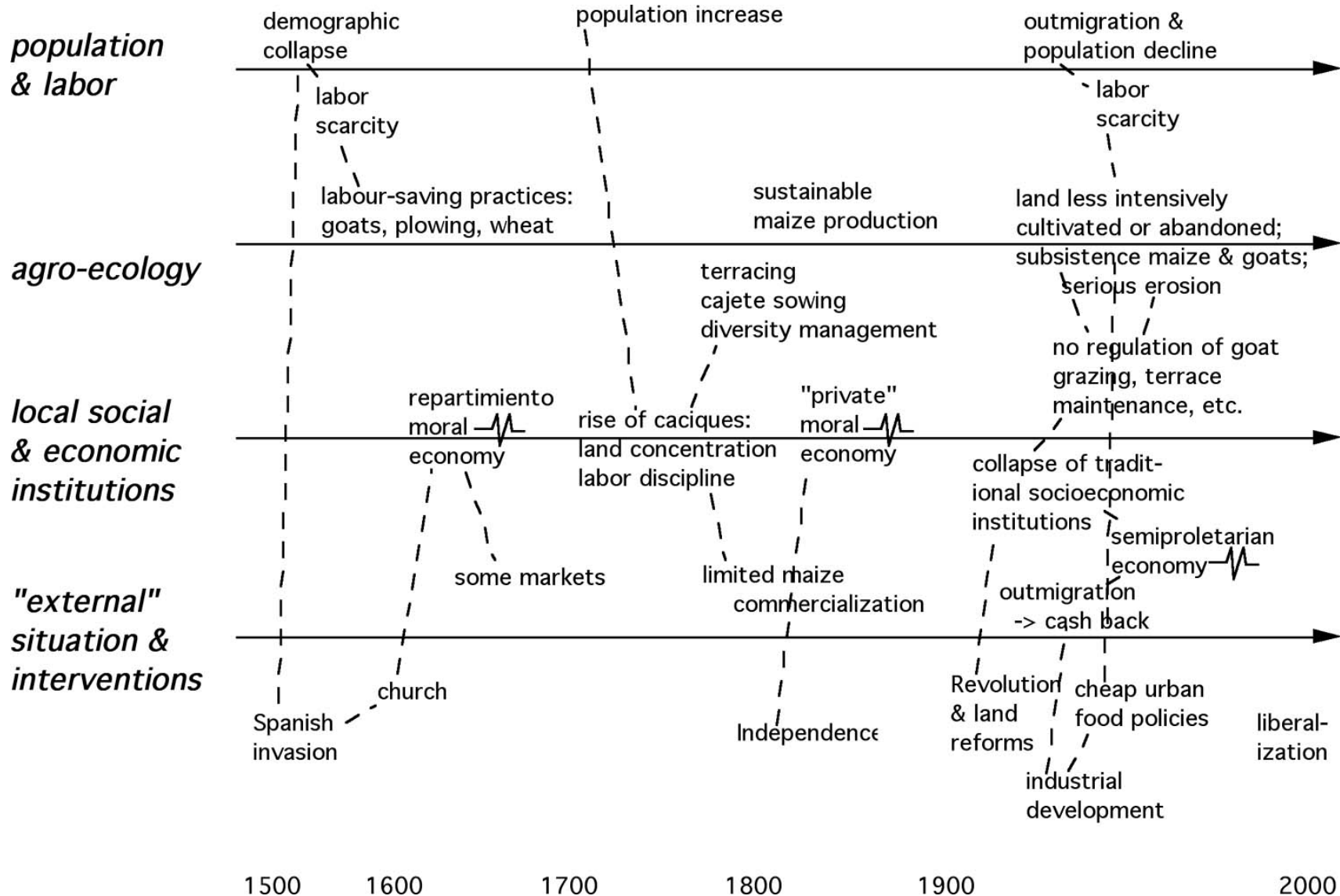Changes in

political-economics, environment, population health & science

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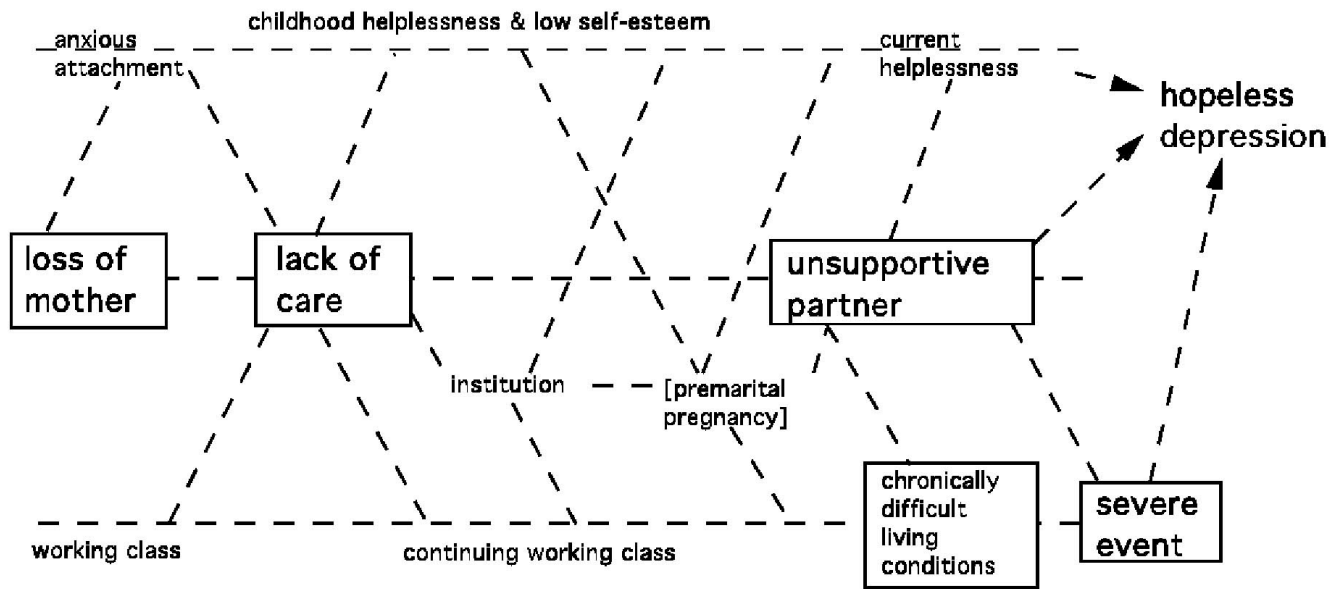Analysis of such processes exposes diverse sites of engagement.

population & labor

demographic collapse

population increase

outmigration & population decline

labor scarcity

labor scarcity

agro-ecology

labour-saving practices: goats, plowing, wheat

sustainable maize production

land less intensively cultivated or abandoned; subsistence maize & goats; serious erosion

terracing cajete sowing diversity management

no regulation of goat grazing, terrace maintenance, etc.

local social & economic institutions

repartimiento moral economy

rise of caciques: land concentration labor discipline

"private" moral economy

collapse of tradit- ional socioeconomic institutions

semiproletarian economy

"external" situation & interventions

some markets

limited maize commercialization

outmigration -> cash back

church

Revolution & land reforms

cheap urban food policies

liberal- ization

Spanish invasion

Independence

industrial development

1500   1600   1700   1800   1900   2000

Vignette 2:
Intersecting Processes
social studies of mental illness

psychology

anxious
attachment

childhood helplessness & low self-esteem

current
helplessness

hopeless
depression

family

loss of
mother

lack of
care
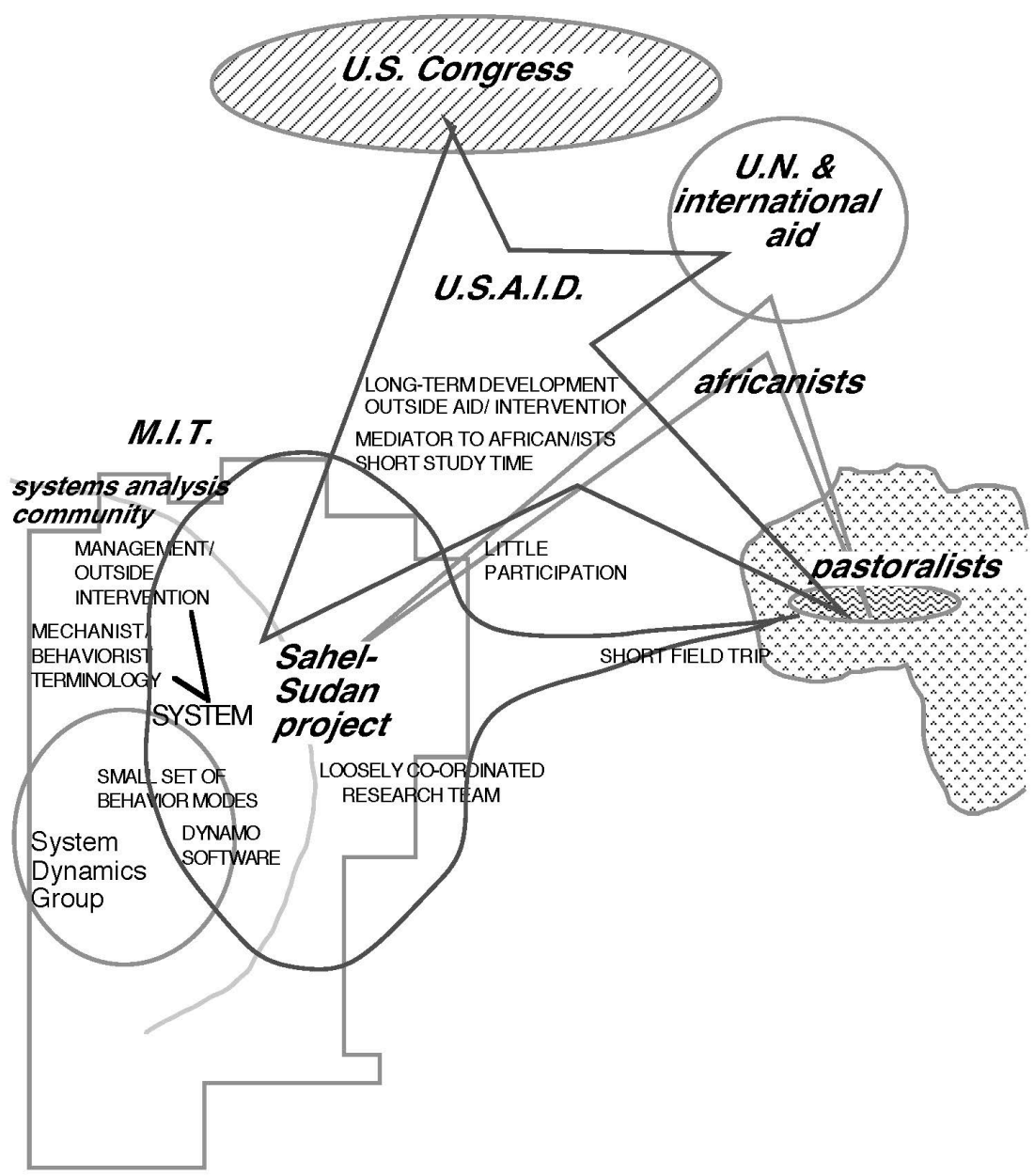
unsupportive
partner

institution — — [premarital
pregnancy]

chronically
difficult
living
conditions

severe
event

class

working class

continuing working class

Vignette 3: Heterogeneous Resources

social studies of science

U.S. Congress

U.N. & international aid

U.S.A.I.D.

africanists

M.I.T.

systems analysis community

LONG-TERM DEVELOPMENT
OUTSIDE AID/ INTERVENTION

MEDIATOR TO AFRICAN/ISTS
SHORT STUDY TIME

pastoralists

MANAGEMENT/
OUTSIDE
INTERVENTION

LITTLE
PARTICIPATION

MECHANIST/
BEHAVIORIST
TERMINOLOGY

SYSTEM

Sahel-Sudan project

SHORT FIELD TRIP

SMALL SET OF
BEHAVIOR MODES

System
Dynamics
Group

DYNAMO
SOFTWARE

LOOSELY CO-ORDINATED
RESEARCH TEAM

U.S. Congress

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africanists

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LOOSELY CO-ORDINATED RESEARCH TEAM

System Dynamics Group

DYNAMO SOFTWARE

"long, heterogeneous list of resources and allies that scientists... gather... to make dissent impossible"
-> Q: How difficult is it, in practice, to modify established knowledge & practices?

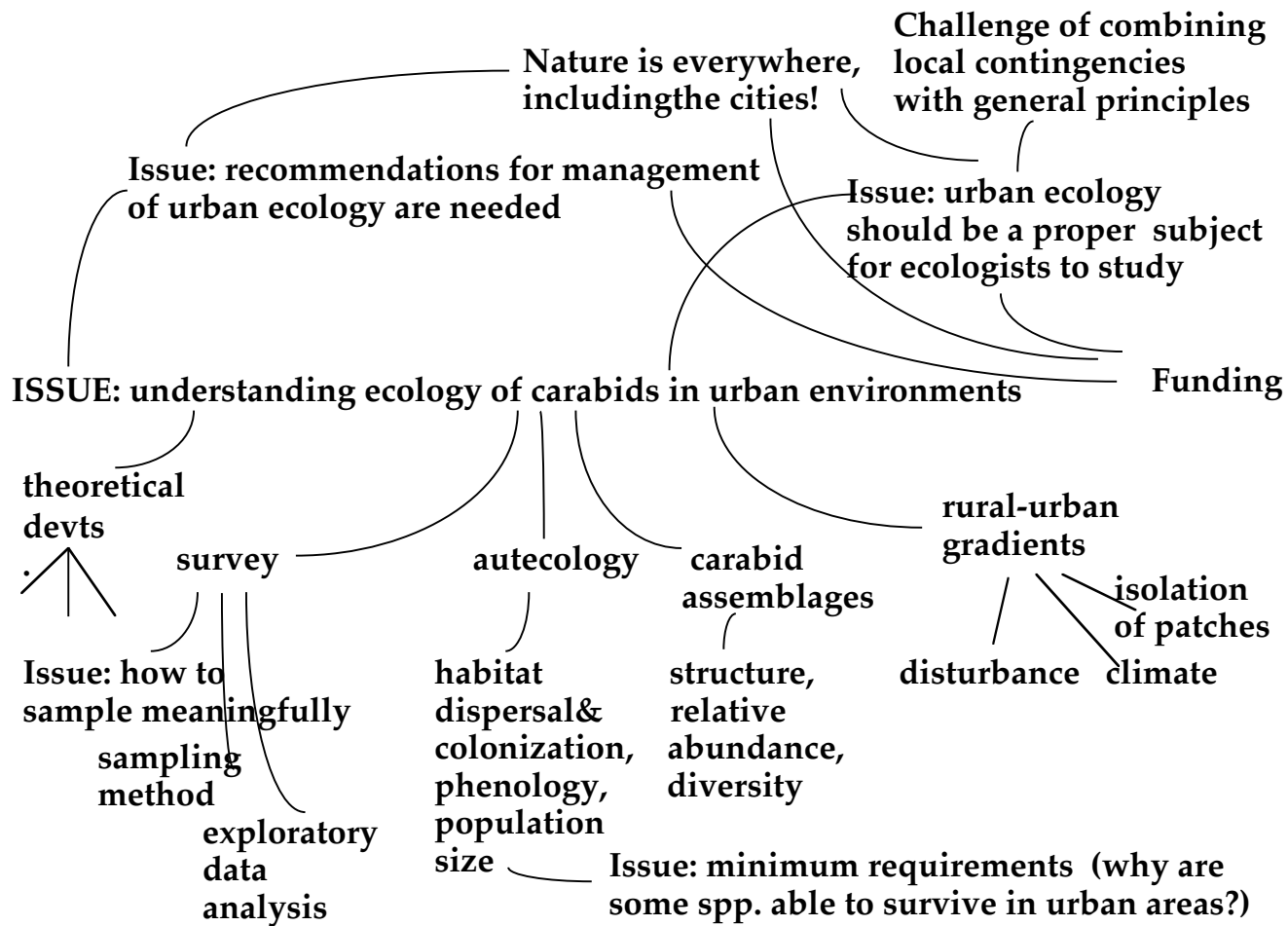-> 1. Humans, other living & non-living things all resist being mobilized (ANT)
vs.
2. Reflexive, embedded, self-conscious human modifiers

Path 2 from Latour (1987): interdisciplinary workshops etc.
for "refractive practice"
(3 more vignettes + problems + contributions)

Vignette 4:
Mapping workshops

Nature is everywhere, includingthe cities!

Challenge of combining local contingencies with general principles

Issue: recommendations for management of urban ecology are needed

Issue: urban ecology should be a proper subject for ecologists to study

ISSUE: understanding ecology of carabids in urban environments

Funding

theoretical devts
.

survey

autecology

carabid assemblages

rural-urban gradients

isolation of patches

Issue: how to sample meaningfully

sampling method

exploratory data analysis

habitat dispersal& colonization, phenology, population size

structure, relative abundance, diversity

disturbance

climate

Issue: minimum requirements (why are some spp. able to survive in urban areas?)

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-> Ideal 1

Flexible engagement

participants in any knowledge-making situation
connect quickly with others who are almost
ready to foster participatory processes
&, through the experience such processes
provide their participants,
contribute to enhancing the capacity of others
to do likewise.

Vignette 5:
Participatory Community Planning

Vision 20/20			**WEST NIPISSING VISION**			February 1993		
STRONG DIVERSIFIED ECONOMIC BASE			**EXCITING ATTRACTIVE COMMUNITY TO LIVE IN**			**ACTIVELY INVOLVED POPULATION**		
WIDELY PROMOTED TOURISM BASE	EXPANDED BUSINESS DEVELOPMENT	APPROPRIATE NATURAL RESOURCES DEVELOPMENT	WELL MAINTAINED EXPANDING INFRA-STRUCTURE	COMMUNITY BASED SERVICES	RESPONSIVE ACCOUNTABLE UNIFIED GOVERNMENT	ACTIVE INVOLVED COMMUNITY	IMPROVED RECREATION OPPORTUNITY	LIFELONG EDUCATION FACILITIES
Broad Based Tourism Promotion	Modern Recycling Facilities	Forestry Development	Improved Transportation Network Locally/Area	First Response Teams	Effective Cooperation Between Municipalities	Active Involvement of Citizens in All Community Developments	Youth Activities Promoted and Supported	Accessible Expanded Adult Education
Improved Four Season Accommodation	Northern Ontario Service Industry Centre			Community Based Services for Mental Health & Physically Challenged		West Nipissing Team Cooperation	Improved Access to Lake Nipissing	
	Appropriate Natural & Resource Based Industry	Expanded Local Agricultural Market			Ongoing Citizen Involvement in Local Government			
Accessible Waterways and Waterfronts			Well Serviced Community	Expanded Local Access to Specialized Clinics		West Nipissing Friendly Welcoming Community		Focused Job Training Programs
	Incentive Programs to Attract Businesses	Fish Hatcheries		Coordinated Integrated Services under One Roof	Local Service Boards in Unincorporated Municipalities	Rural Residential Development	Broadened Leisure Activities and Facilities	
Packaged Tourist Attractions & Tours	Francophone Bilinguial College			Expanded Vibrant Senior Citizen Community		Open Communication across West Nipissing		Enhanced Post Secondary Education
	Local Businesses meet all needs	Clean Lake Nipissing	Environmentally Responsive Community		Re-evaluate Land Use By-laws		Improved Organized Sports	
Expanded Coordinated Community Festivals	Attract Government Offices			Restructured Social Assistance System		Youth Involved in Planning All Activities		

Problem

Gripped by uncertainty: Sturgeon Falls springs into action following the closure of its primary employer.

Print

Author: *Haddow, Scott Hunter*

Date: *Jan 1, 2003*

Words: *942*

Publication: Northern Ontario Business

ISSN: *0710-2755*

Sturgeon Falls is again facing the job loss blitzkrieg that is sweeping across Northern Ontario. Weyerhaeuser closed their containerboard mill in Sturgeon Falls on Dec. 5. The closure affected 140 workers and an entire community.

"It translates into a major financial loss to the municipality," says Gary O'Connor, mayor of Sturgeon Falls.

-> Ideal 2
transversal engagement
practice and policy
- takes seriously the creativity & capacity-building from well-facilitated participation among people who share a place or livelihood
- mitigates adverse trans-local decisions
- incorporates knowledge-making of non-local or trans-local researchers—including their analyses of abstracted dynamics of political-economic change

Vignette 6:
"CPR" workshops

"most workshops are dysfunctional.
This one wasn't"

evaluations
New England Workshop on
Science & Social Change
2004

New England Workshop on Science & Social Change

Topics have included

- social shaping of the use of genetic knowledge
- complexities of genes-environment-development
- social implications of ecological restoration
- collaborative generation of environmental knowledge and inquiry
- heterogeneity in biosocial development
- teaching and public engagement beyond disciplinary boundaries
- collaborative production of knowledge: health, environment, and publics (Portugal)
- troubled by heterogeneity? (Portugal)
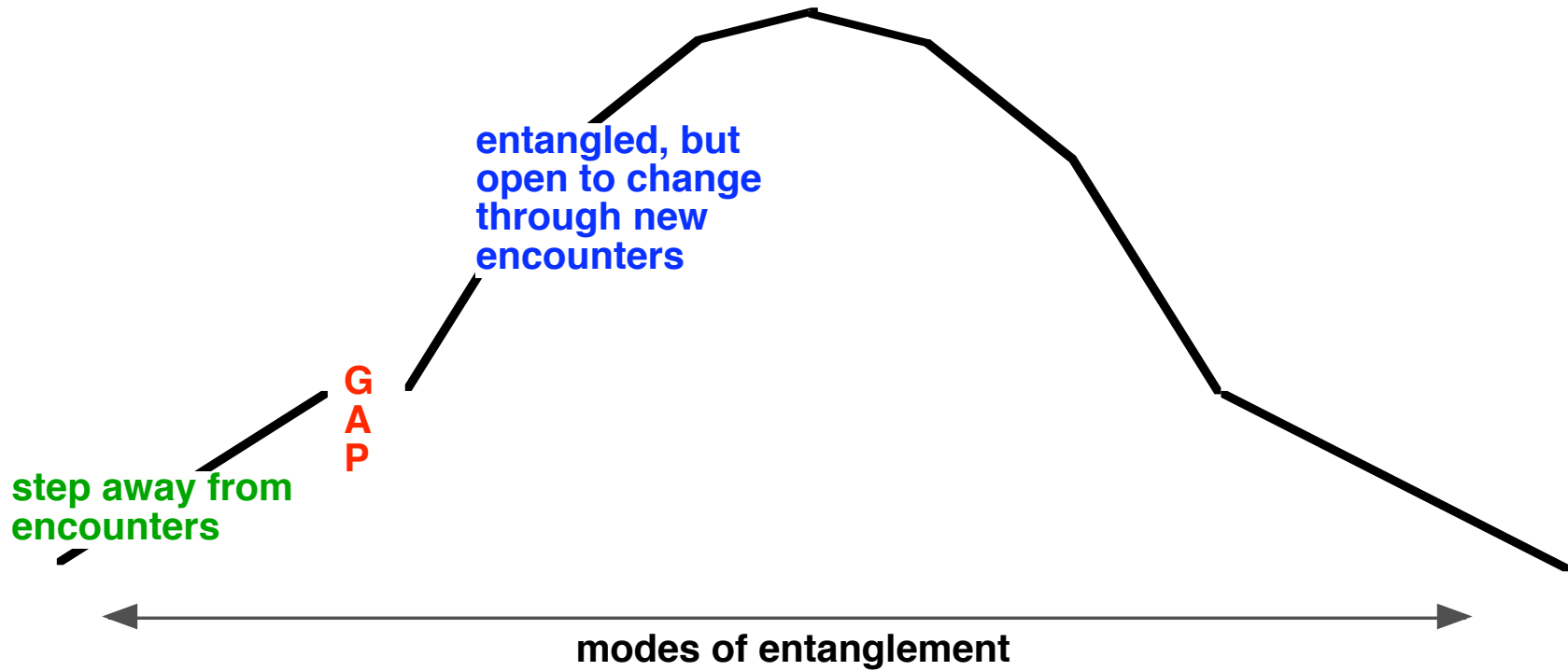- scaffolding social and scientific change

CPR
spaces*

academic
work

activism &
public
engagement
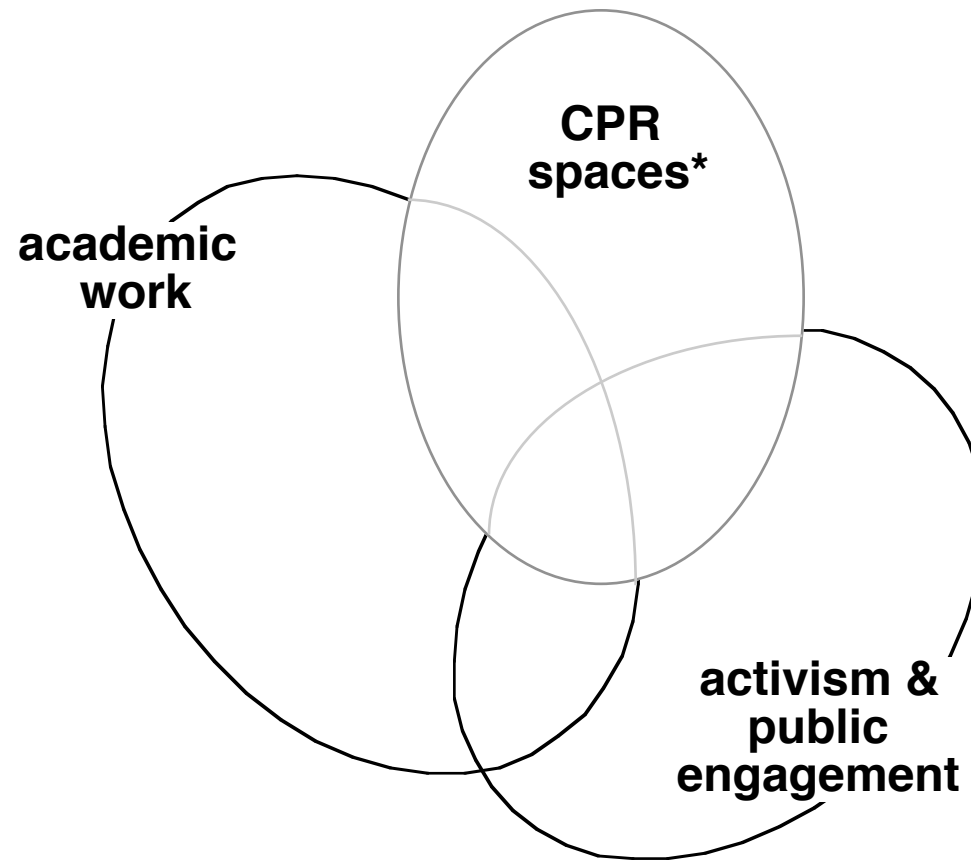
* Connecting, Probing, Reflecting

CPR spaces

emphasizing the value of
discussion, reflection & clarifying
one's identity and affinities
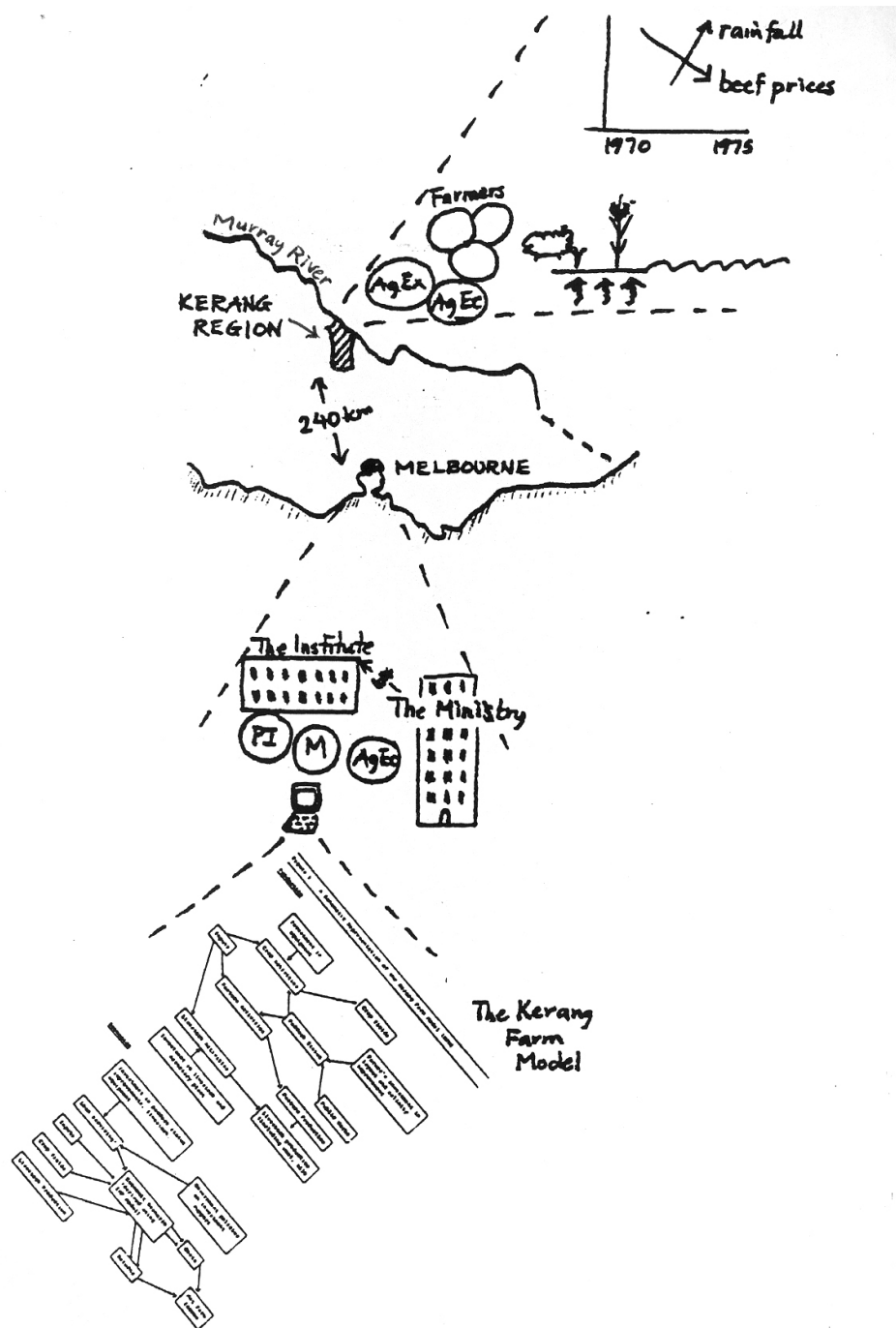with academic and action/engagement dimensions
kept in view

Re-engagement

Revelation

Risk

Respect

interested
in adoption
if fits in with
their particular
situation

G
A
P

early adopters

diffusion of innovations

entangled, but
open to change
through new
encounters

G
A
P

step away from
encounters

modes of entanglement
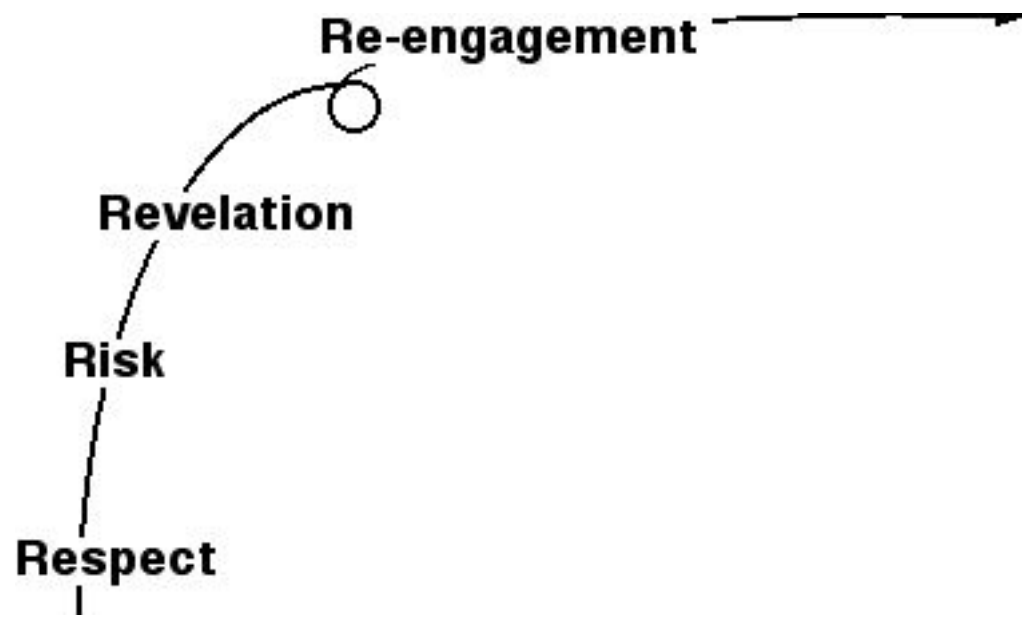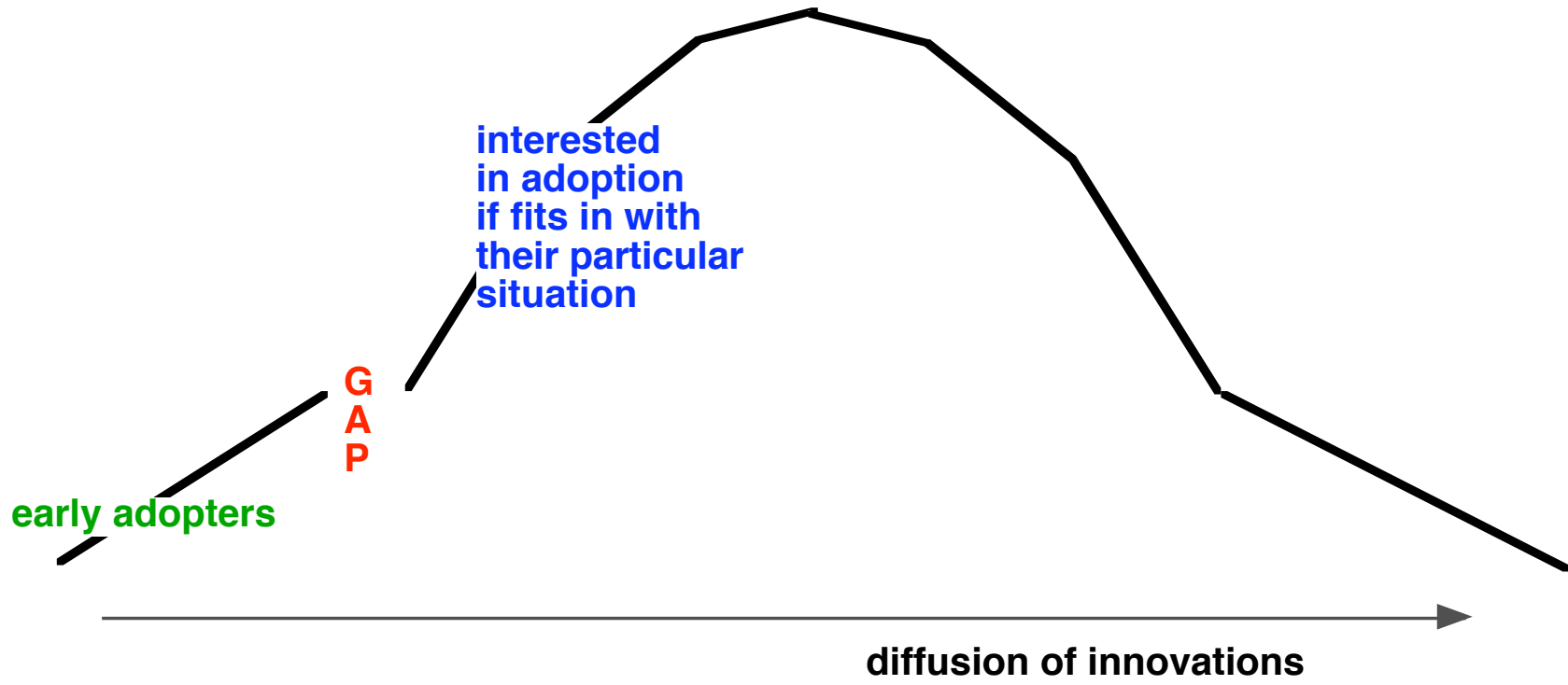
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No grand claim, but 5 contributions:
1 negative; 4 positive

rainfall

beef prices

1970   1975

Murray River

Farmers

KERANG REGION

AgEx   AgEc

240km

MELBOURNE

The Institute

The Ministry

PI   M   AgEc

The Kerang Farm Model

"If I had stayed longer in the area, I may have connected with a range of change agents"

How can we reduce our vulnerability to leaving a path of research too quickly?

Peter J. Taylor

Unruly Complexity

Ecology, Interpretation, Engagement

Unruly Complexity

PETER J. TAYLOR

CHICAGO

TAKING YOURSELF SERIOUSLY
Processes of Research and Engagement

Peter J. Taylor and Jeremy Szteiter

collaborative explorations

http://collabex.wikispaces.com

Like Project-Based Learning (PBL):
participants shape their own directions of
inquiry
on open-ended cases,
stimulated by interactions in a small group

practitioner's portfolio

= teaching as integral to scholarship
+ documentation of development as a teacher

e.g., 2001:
A. Wide Scope of My Teaching and its Active, Ongoing Development
B. The Philosophy of Teaching Critical Thinking I Brought to UMB
C. Teaching Critical Thinking about Science in its Social Context
D. Leading Students from Critical Thinking to Taking Initiative
E. Learning from Difficult Courses in a Thoughtful, Respectful, and Professional Manner
F. Learning from Educators beyond CCT
G. Promoting Collegial Interaction Around Innovation in Teaching

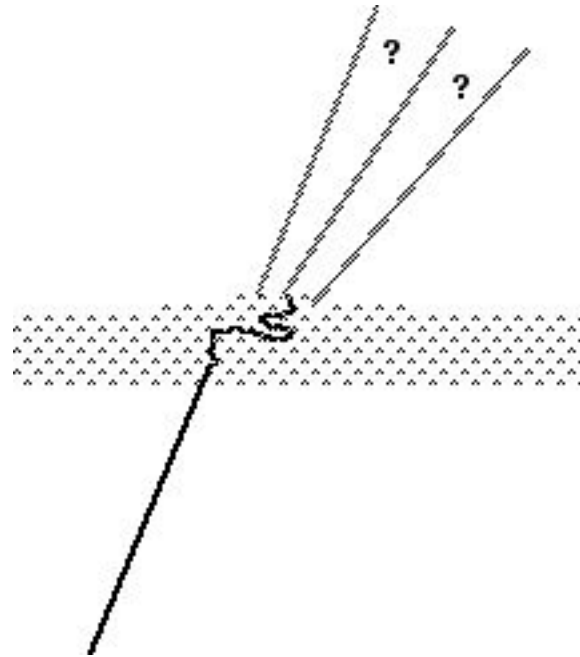## http://bit.ly/PJTteach

Activity

Qualitative Research
Subjects: Experienced academics
Area: Making sense of the ways their teaching developed over the course of their career

Design interview questions
(think->pair->share)

refractive practice

Plus-Delta feedback:
On a strip of paper or http://bit.ly/PlusDelta, note:
+) one thing you appreciated from the presentation   &
Δ) one thing that needs to be developed further (by the speaker or by you)

http://bit.ly/GGHS2014