Ecosystems Services Come of Age Conference Paper, Portland, 2012

SLIDE 1 - Sustainability: from systems to emergence

This talk is the product of writing a theory chapter in a new textbook (**pictured**) that aimed to define sustainability. It is a step in a conversation between the co-authors, and aims to invite you into that conversation and offer some framing questions that may help to progress thinking in this field.

I will jump in largely where we left off in the chapter given the time constraints.

> **Slide 2** - "Sustainability is the emergent quality of a system that results from the responsive interplay between the caring actions of individuals (bottom-up) and feedback about the persistence and nourishment of the interrelationships between elements of the supporting environment and ultimately the global system (top-down)"

This is our last of a series of working definitions in which we progressively argued for an integrated, holistic model that assumes that sustainability is a quality of a system that is achieved through the persistence and nourishment of interrelationships.

To check our definition against the emergence of one sustainable model of human practice - Australian indigenous people and their development of societal practices over innumerable generations. Two elements came out of this comparison –

1. Focusing on inter-relationships as the generative space for the emergence of sustainability, changes the focus from the way sustainability has been regarded in the past.

2. And flattening power structures is an important ingredient to maintaining good social and environmental outcomes.

This discussion and reflection is very much at a beginning stage – we're really only hypothesising what can be drawn from this model and applied to our current context, but we think this conception of sustainability is useful in 3 ways –

SLIDE 3

1. It describes the kinds of relationships individuals and human groups need to engage in at the micro level to encourage participation and good science

- Local actions need to be caring and nourishing, and result in preservation
- Responsive interplay would include the sharing of knowledge between individuals
- It implies an active responsibility to be involved in the feedback process to the macro scale including the formation of policy (e.g. involved in public monitoring programs like water watch)

SLIDE 4

2. It provides a guide for anybody working at the macro level (e.g., science, historians, artists, institutions of all kinds). Their role would be to be nurturing while they

- monitor and evaluate for consequences of actions (utilitarian ethics)
- look for emergent patterns
- provide tight feedback to the micro scale and,
- contribute to the development of policy

These roles position the macro in terms of its relationship with the micro, not as some power source in its own right. In fact we think power should be re-distributed across all participants in the relationship.

SLIDE 5

3. It describes a relationship that needs to exist between the micro and macro scales

- Tight feedback to benefit the environment and global system
- A highly connected structure that links micro and macro, for efficiency in communication and resilience if a link is broken
- Recognition that all environmental elements are part of the system and connected
- Sharing of knowledge in a distributed way so that no one person has all the knowledge or power
    - everybody needs other people, and a system that forces people to need each other, with no one person to hold too much knowledge
- and dependency on each other and other systems is maintained
    - affluence should not change the knowledge dependency

I want to end with some questions that might form a framework of critique for policy development for sustainability:

- Are the micro and macro listening to each other?
- Does policy engage with and protect the connected space between micro and macro?
- Do the micro and macro nourish each other?
- Do the micro and macro need to come closer together, flatter, into each other's pockets?

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