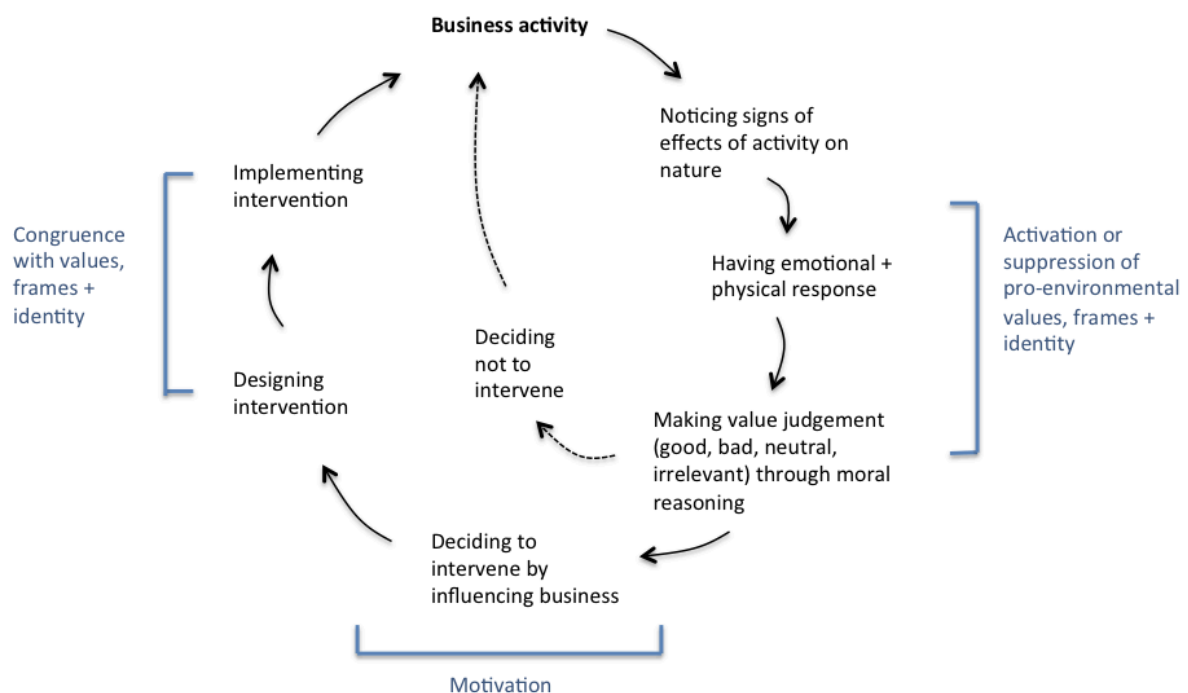


## Sustainability and Responsibility Plus (SR+) seminar: 24<sup>th</sup> Oct 2013

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Following on from John Foster's presentation, I have been exploring the topic of environmental denial and paradigms in psychology research.

Inspired by the concept of regulating feedback loops from systems thinking, I produced the following model to describe how regulation of the human-nature relationship could function. The model takes an individual-level analysis, showing business activity as the particular form of human activity that I am interested in.



### Factors adversely affecting loop function

The functioning of this feedback loop can get interrupted or affected at any of these stages. I am particularly interested in the effect of two factors in particular: the dominant social technoscience paradigm, and how one responds to psychological threat brought on by ecological problems. Both of these factors can distort, displace, hide, ignore, suppress, exaggerate or denigrate certain views.

Technoscience paradigm promotes:

- Anthropocentric view that humans are separate from and superior to nature
- Human domination of nature is a moral right
- Achieve mastery over nature and gain freedom from the limits imposed by nature through human ingenuity - technoscience
- Technoscience as solution to problems caused by technoscience progress
- Economic growth through consumerism
- Extrinsic values and goals (e.g. material success, social status, wealth)
- Valuing nature as an instrument for human ends rather than for its own inherent ends

Responses to psychological threat can be categorised as shown in the following table:

## RESPONSES TO PSYCHOLOGICAL THREAT (to existence, integrity of identity, self esteem)

Hamilton & Kasser (2009); Crompton & Kasser (2009)

### DENIAL STRATEGIES

Suppressing anxiety by not allowing facts to be accepted in the conscious mind.

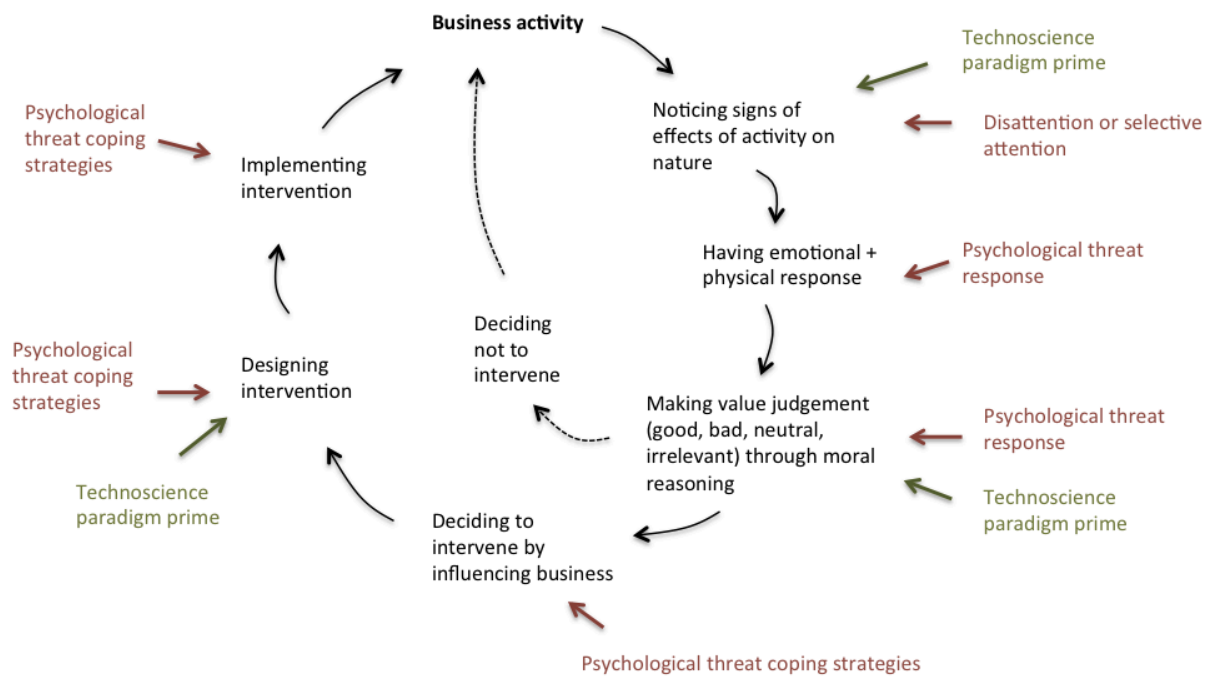
Evidence conflicts with fundamental beliefs (e.g. natural for humans to exploit the Earth's resources and to have control over nature, continued economic growth should not be disrupted, governments should not intervene in the market, climate change is natural and not new) creating cognitive dissonance, which is resolved by rejecting the science

<b>Rejecting the facts</b>	By denying reality of the facts, no emotions need be felt
<b>Deflecting and ignoring</b>	
<b>Restricting exposure to distressing information</b>	

### MALADAPTIVE COPING STRATEGIES

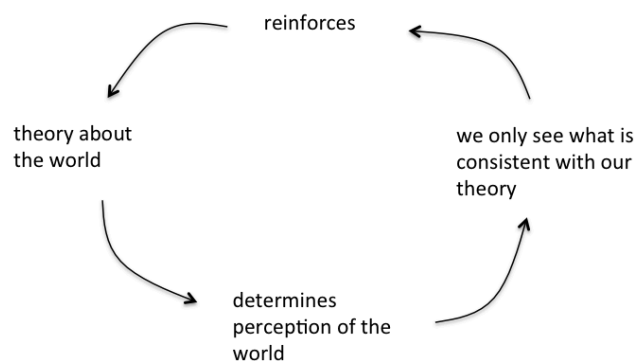
Acknowledge and accept facts up to a point, but the emotional impact is such that some aspects of facts or associated emotions are blunted or distorted

<b>Reinterpreting the threat</b>	<b>Making it smaller</b>	Reduces power of the threat and tempers emotional impact
	<b>Distancing (temporally)</b>	
	<b>Keep thoughts in the present – avoid reflection on the future</b>	
<b>Diversionary strategies</b>	<b>Minor behaviour changes and displaced commitment</b>	Mollify guilt or helplessness, relieves need to engage in the more radical change necessary
	<b>Pleasure seeking</b>	Psychic relief from anxiety
	<b>Materialistic goal striving</b>	Enhance self esteem as defence against thoughts of death, or to demonstrate one is a worthy person in a cultural/economic climate that equates individual worth with financial status & possessions
<b>Blame shifting, projection &amp; denigration</b>	<b>Making others responsible for problem or solution</b>	
	<b>Reinforce in-group/out-groups distinctions and then denigrate out-group</b>	Solidify and protect sense of self
	<b>Perceiving nature as part of one's out-group</b>	
<b>Indifference strategies</b>	<b>Apathy – defence against distress from allowing self to care in the face of 'hopeless' situation</b>	Suppressing feeling or refusing to feel
	<b>Resignation and passivity</b>	
<b>Unrealistic optimism / wishful thinking</b>	<b>'Benign fictions' (Taylor 1989) illusion and delusion</b>	
	<b>Technofix</b>	



The first stage in the loop is perhaps most critical because if we don't even get as far as noticing the signs then the loop has no chance of working effectively.

What we notice is filtered by our mental model or worldview, which is susceptible to priming by the dominant technoscience social paradigm. This can become a trap in thinking as represented in the following self-sealing behaviour loop:



The interaction between these two loops of worldview and influencing business activity at the stage of noticing signs is therefore an important relationship as it sets up the underlying dynamic affecting the way the rest of the loop unfolds. This provides an explanation of why sustainable development can never be an effective solution to regulating human-nature relationship: as others have argued, it is embedded in the technoscience paradigm that is implicated in the anthropogenic ecological crisis we face today (e.g. Dryzek 1997; Foster 2008).

Denial as a response to psychological threat involves suppressing anxiety associated with ecological problems by not allowing facts to do with the reality of the situation to be accepted in the conscious mind.

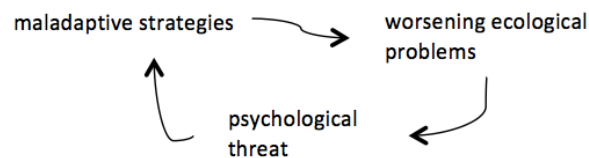
The second stage is where emotional and physical response is conscious, but may be dealt with in a maladaptive way, as described in Fig.1.

At the third stage, thoughts and reasoning occur, value judgements are made about what one has perceived. By this point, certain values, identities and frames will have been activated in the mind and increased in salience. Individuals may experience cognitive dissonance as conflicting values, identities and frames arise. If as a coping strategy a person has oriented to extrinsic goals, to do with external rewards, praise and positive evaluation by others, if affirmation of pro-environmental identity by others does not occur that identity is very likely to be suppressed and a decision may be made at the next stage of the loop to do nothing. Alternatively, feeling isolated for holding a minority view, if feeling overwhelmed, a person could respond with apathy and inaction.

Should a decision to intervene in business activity be made at the fourth stage of the loop there exists motivation to act. What a person designs as the intervention is the fifth stage and this depends on how they respond to psychological threat - a displacement activity for example could easily be chosen. The chosen intervention may or may not be fully congruent with the values, frames and identities that were salient at the third stage.

Moving to the sixth stage of implementation, an individual may encounter resistance in the organisation, which they may respond to with despair leading to inaction, or with other emotions such as frustration. Issues of legitimacy arise here. How they attempt to implement the intervention and then deal with the organisational response influences their effectiveness in influencing business activity at the seventh stage, the ecological effects of which are then observed as the loop continues in an iterative process.

The feedback loop represents an abstracted and simplified aspect of reality, it interacts with other feedback processes as part of a wider system. Already discussed is its interaction at the first stage with a worldview feedback loop, another example is how responding to psychological threat brought on by ecological problems with maladaptive strategies creates a feedback loop that reinforces ecologically disharmonious behaviour:



### Maintaining loop function

Adaptive strategies to responding to psychological threat have been suggested (Hamilton & Kasser 2009):

<b>ADAPTIVE COPING STRATEGIES</b>	
Accepts facts and allows rather than resists accompanying emotions to be felt, and tries to act on basis of both. Promotes psychological adjustment to new circumstances and stimulate actions appropriate to the new reality. Akin to later stages of mourning. The 'death' may be loss of individual's vision of the future.	
<b>Expressing, engaging with and controlling emotions</b>	
<b>Seek information</b>	Alleviate anxiety of the unknown, plan for or reimagine different future
<b>Collaborative problem-solving and taking action</b>	Exert some control over situation, shared sense of purpose can reduce 'burden of knowing'
<b>Considered reflection on death</b>	Activates intrinsic values and goals

### Mindfulness

Mindfulness has been proposed as a strategy for responding in an adaptive way to psychological threat (Crompton & Kasser 2009). Mindfulness refers to the impartial witnessing of the contents of consciousness in the present moment – body sensations, thoughts and emotions.

This is because through practicing mindfulness, practitioners develop the ability to:

- Choicefully respond to stimuli rather than automatically react
- Move toward or at least be with rather than reject and resist uncomfortable thoughts and feelings
- Notice the salience of values, frames and identities and observe moral reasoning moment-to-moment in one's mind.
- Expose technoscience primes to consciousness awareness, where can then have more control over its effects

According to Brown & Ryan (2007) in mindful mode, "behaviours tend to be regulated autonomously, and in accord with chosen interests and values, rather than in accord with personally or socially derived forces or pressures" (p274).

I propose that attending to each stage of the loop helps maintain functioning, for example:

- Signals of ecological impact - are we seeing and accepting the reality of the situation?
- Emotional and physical body response to noticing signals - are these signs of psychological threat?
- Thoughts - what value judgements and moral reasoning are occurring, how are we being influenced by social technoscience primes, are we orienting towards extrinsic materialistic goals and ego-involvement?
- Decision-making – what coping strategies are in play?
- Design of intervention – is it congruent with intrinsic values and identity of nature connection, is it influenced by social technoscience primes, is it a maladaptive design?

The importance of attention to the functioning of this model echoes a model of disease by Schwartz (1983) showing how self-regulation of health is based on feedback loops that can be enhanced through attention:

Disattention → disconnection → disregulation → disorder → disease

Attention → connection → regulation → order → health

If each stage persists over time then progression to the next stage ensues. Through not attending to signs of disorder and disease, the feedback loop becomes disconnected and it becomes more difficult for the system to self-regulate. This model can apply at different levels of recursion from the individual to the organisation to the planet as a whole.

Shapiro & Schwartz (2000) later adapted this model to include an initiating antecedent of intention, in recognition of the importance not just of attention but also of particular qualities that are brought to that attention:

- Non-judgement
- Patience
- Beginners mind, openness
- Trust in self
- Non-striving
- Acceptance
- Letting go
- Empathy
- Compassion

These qualities help generate awareness of symptoms as not just intrapersonal but also interpersonal and transpersonal. In other words, bringing qualities of intention that cultivate a concept of the self as part of a wider interdependent and interconnected system. They call this 'intentional systemic mindfulness'.

The intentional qualities described by Shapiro & Schwartz fit very well with intrinsic values and sense of self as part of nature that the psychology literature report as motivating pro-environmental behaviour (e.g. Crompton 2010; Brown & Kasser 2005; Schultz 2005).