

DECISION INTEGRITY AND SECOND ORDER CYBERNETICS

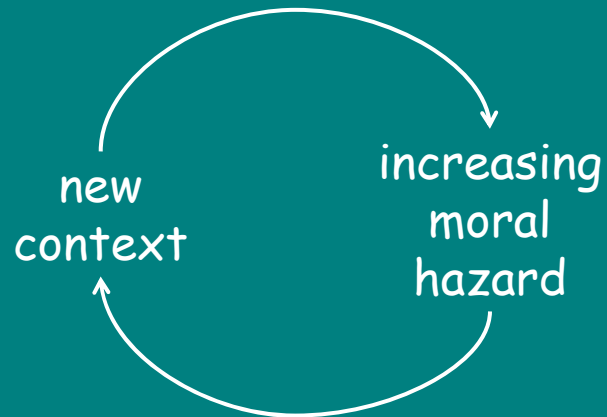
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International Futures Forum

WHAT FOLLOWS

- The changing context of decision making
- Decision integrity as a system
- The steps to 2nd order cybernetics
- Towards 2nd order management

THE CHANGING CONTEXT OF DECISION MAKING



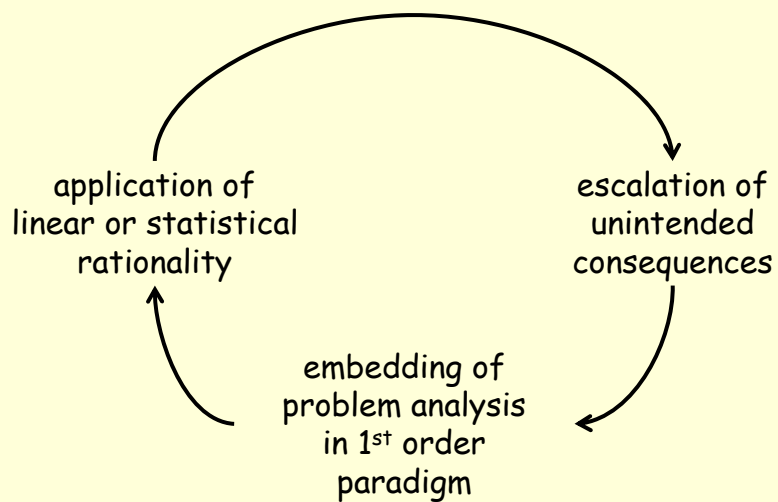
Increasing Unpredictability

- Instability of the operating environment
- Discontinuities and disruptions
- Synchronous failures

Increasing Moral Hazard

- Obscurity and obfuscation
- Fraud and deception
- Corruption
- Vested interests
- Absence of ethics

Old Historical Habits



Application of Linear or Statistical Rationality

- Attachment to previous successes in a previous era when prediction and forecasting looked more applicable

Escalation of Unintended Consequences

- Missing significant unique events (e.g. black swans)
- Failing to see how deeper structure is driving behaviour

Problem Analysis Embedded in First Order Paradigm

- Locked into the objective rational paradigm
- Solutions keep generating further unintended consequences
- Quantitative logic overrules ethical considerations

Questioning the Dominant World view

- Dominated by command and control and limited organisational forms
- Subject object split
- The assumption that reality is perceived

"With the essence of observing, namely the process of cognition, being removed, the observer is reduced to a copying machine, and the notion of responsibility has been successfully juggled away."

Heinz von Foerster

Beyond the Classical Scientific Worldview

Questioning the dominant scientific worldview

The conceptual emergency

Search for alternative worldview

Postulate that a reflexive worldview might work better

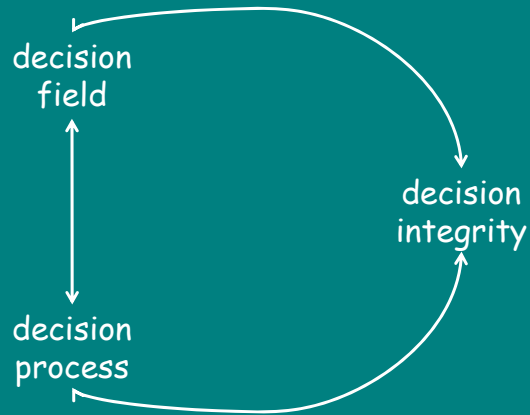
Search for Alternate Worldview

- One better suited to our times and conditions
- Able to navigate uncertainty
- Able to reduce unintended consequences

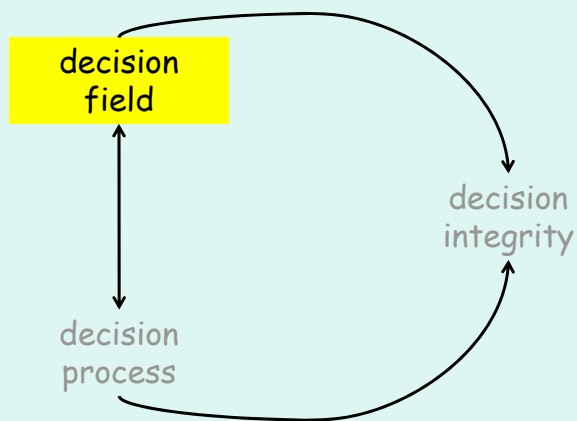
From Decision Analysis to Decision Integrity

Decision Integrity
is an example of a 2nd order
framework for deepening
understanding of
decision making

DECISION INTEGRITY AS A SYSTEM



The Decision Field



Complexity and Uncertainty

- Emergent properties
- Not forecastable
- Unknown consequences

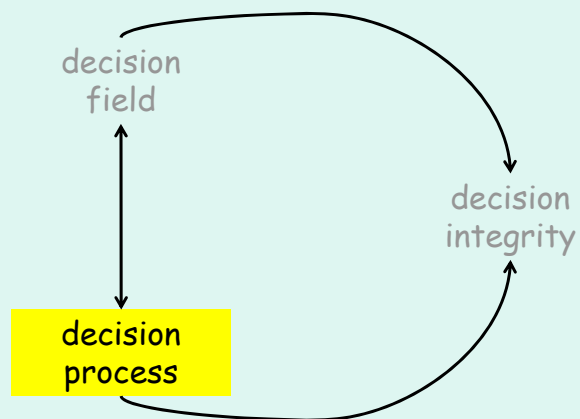
Mapping With Multiple Scenarios

- Predetermined elements
- Deeper structure
- Discontinuities and bifurcations
- Alternative narratives

Ashby's Law of Requisite Variety

- Quasi infinite possible states
- Mis-match of linear control models

Decision Process



Inappropriate Decision Methods

- Linear extrapolation
- Statistical methods
- Not matching emergence and ambiguity

Decision Conduct

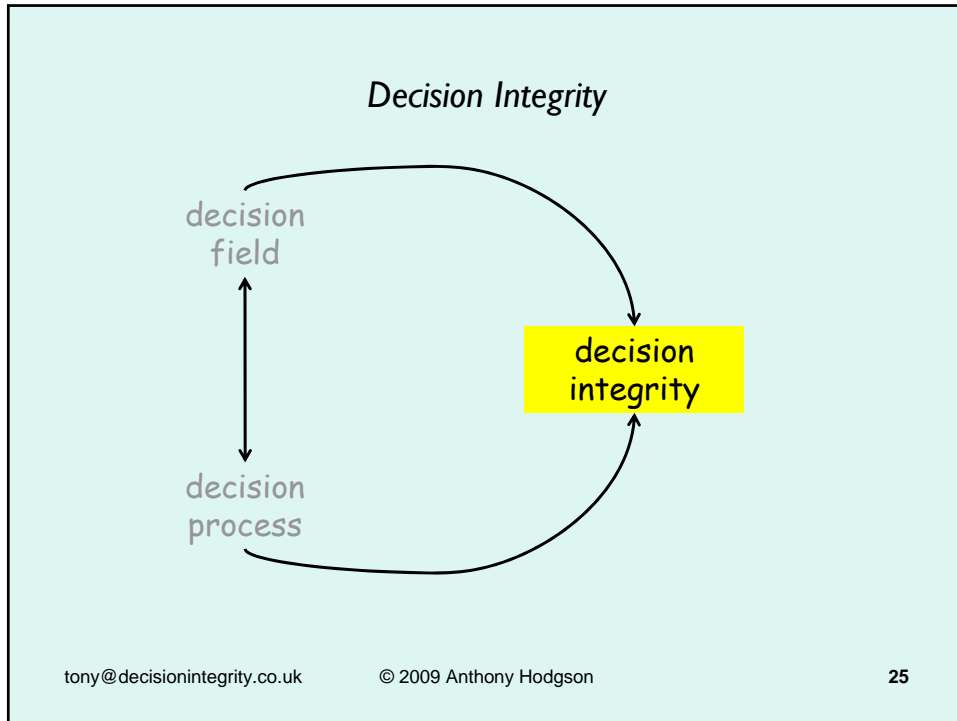
- How the human decision maker conducts himself
- Unconscious or conscious
- Decision makers as part of the decision system

Changing Mental Models

- Search for appropriate mental models to match the new conditions
- Induction and enactive cognition
- Gentle art of re-perception

Decision As Learning

- Rather than application of knowledge
- Collaboration and co-creation of mental models

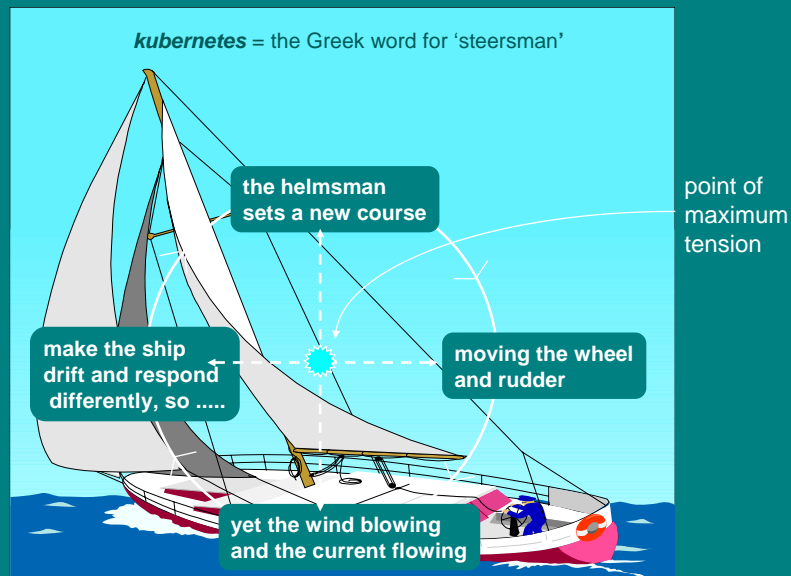


- Double Loop Learning
- Revision of assumptions not just errors
 - Requirement for self-examination of mental models
 - The decision implicates the decision maker
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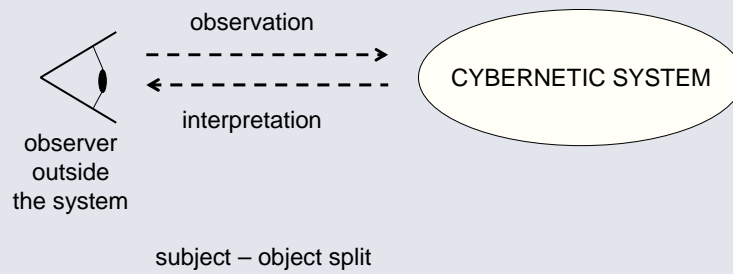
Cognition Not Separate from the World

- Cognition as embodied action
- Bringing forth worlds rather than representing and manipulating them
- The cognizer is part of the system
- Cybernetics and feedback are inherent

THE STEPS TO 2ND ORDER CYBERNETICS



1st Order Cybernetic Paradigm

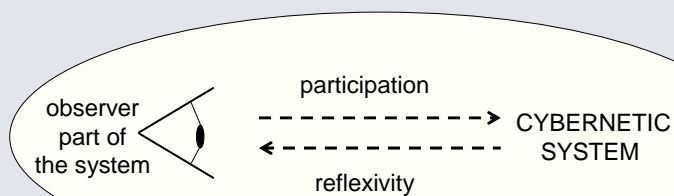


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2nd Order Paradigm (weak)



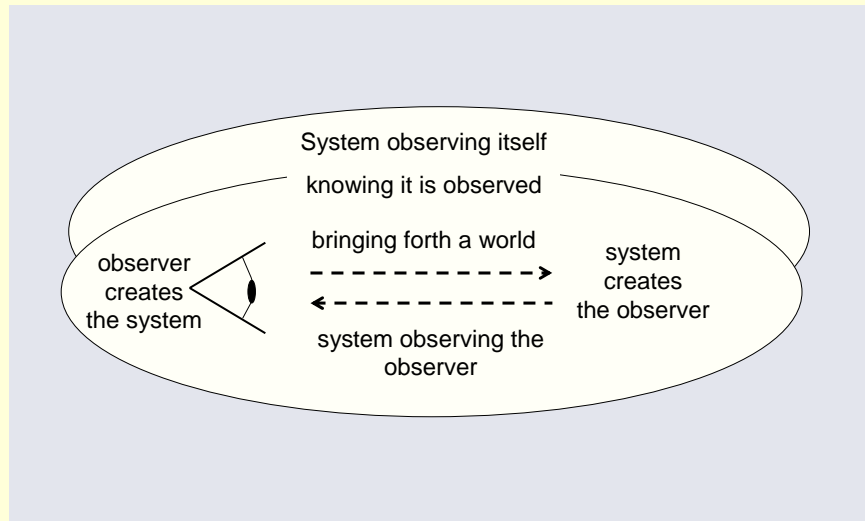
the observer is inseparable from the observation

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2nd Order Paradigm (strong)



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2nd Order Cybernetics

- Reflexive worldview
- The decider is part of the decision system
- The decision maker partly creates the system and cannot escape the consequences of his or her decisions

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Reflexivity and the Laws of Form

- The state of the decision maker is part of the decision
- Choice in a world that contains the state of the decision maker

Ethics Not Reducible To Rules

- Selection in a framework of moral rules is not choice
- Ethics is always down to the individual

Undecidable Questions

- Choice not reducible to an answer in a framework
- Paradoxically undecidable questions require the real decision of a responsible human being

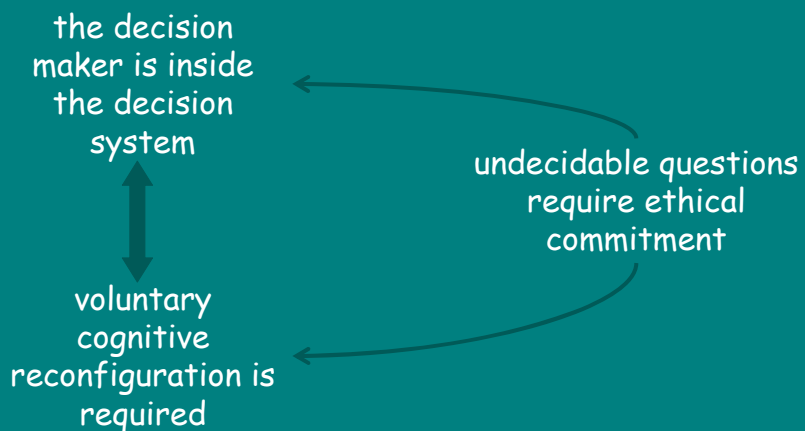
Undecidable Questions

- High complexity and high variety present us with undecidable questions
- In which choice is not reducible to an answer in a framework
- Undecidable questions require the real choice/decision of a responsible human being

Undecidable Questions Require Ethical Commitment

- Not abdicating responsibility behind and “objective” framework
- The copying machine analogy

SECOND ORDER MANAGEMENT



The Context of Next Organisation

- Inside and outside is under continuous negotiation
- Perpetually self-reflective organisation

Voluntary Cognitive Reconfiguration

- The state of mind of the decision maker is a component of the decision

The Decision Maker is Inside the Decision System

- The dissociation of decision from decision maker leads to a misleading sense of objectivity and “blaming” externalities

“With this freedom of choice we are now responsible for whatever we choose. For some this freedom of choice is gift from heaven. For others it is an unbearable burden. How can man escape it? How can one avoid it? How can one pass it on to somebody else? With much ingenuity and imagination, mechanisms were contributed by which one could bypass this awesome burden. With hierarchies, entire institutions have been built where it is impossible to localize responsibility. Everyone in such a system can say 'I was told to do X'.”

Heinz von Foerster

DECISION INTEGRITY SUMMARISED

*THE DECISION MAKER IS INSIDE THE
DECISION FIELD*

1. Double loop learning
2. Embodied cognition
3. Induction and learning
4. Undecidable questions
5. 2nd order cybernetics
6. Reflexivity and the laws of form
7. Ethics not reducible to rules