



## SST-07 The Enhanced Morphogenetic Cycle



A city launches a programme to reduce traffic congestion and improve air quality. The initiative includes new bus routes, expanded cycling infrastructure, and public campaigns encouraging people to reduce car use.

At first, the results are uneven. Some residents begin using public transport more frequently, while others continue to rely on private vehicles. Businesses adjust delivery schedules, and community groups raise concerns about changes to local streets.

As the programme develops, city officials modify policies, infrastructure improvements are expanded, and new patterns of behaviour gradually emerge. Over several years, the transport system evolves in ways that were not fully anticipated when the initiative began.

Understanding this process requires more than simply observing that interaction leads to change. We also need to understand how different factors influence those interactions and how feedback within the system shapes its development.

The Enhanced Morphogenetic Cycle provides a framework for analysing these additional mechanisms.

### Formal Description

The Enhanced Morphogenetic Cycle extends the classical morphogenetic framework by incorporating additional mechanisms that influence social interaction, feedback interpretation, and the propagation of change across social systems.

These mechanisms include differentiated constraint domains, system needs, feedback processes, and multi-level forms of agency and learning.



### Plain English Explanation

The previous module identified several questions that arise when applying the classical morphogenetic cycle to real social systems. In particular, we asked what mechanisms operate within the interaction phase of the cycle and how these mechanisms influence the development of social systems over time.

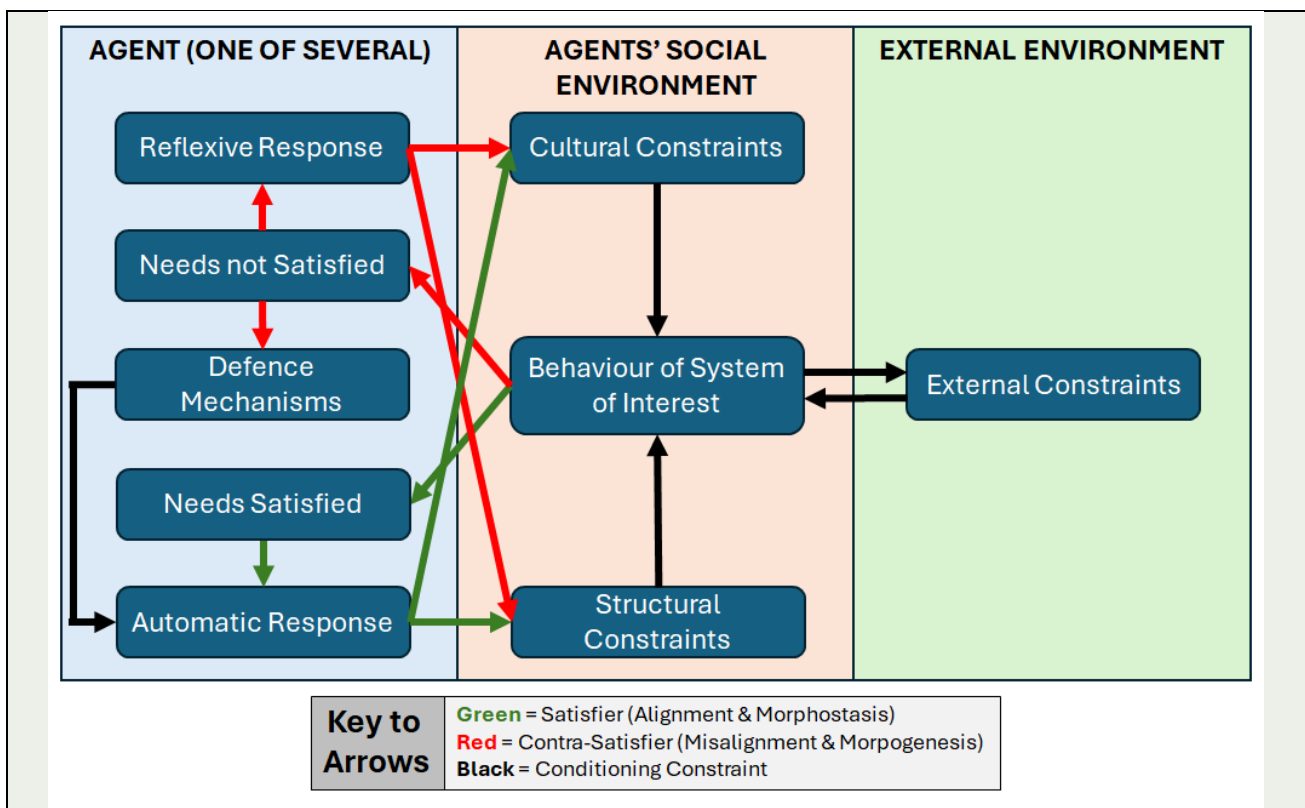
The Enhanced Morphogenetic Cycle (EMC) addresses these questions by extending the classical framework and incorporating additional concepts that help explain how interaction unfolds within complex social environments.

For example, the EMC distinguishes between different kinds of **constraints** that shape social action, including external conditions, institutional relationships, and cultural expectations. It also recognises that systems must sustain certain **needs** in order to remain viable.

Interactions between agents generate **feedback** that either supports or undermines these needs. The way this feedback is interpreted can influence whether systems adapt successfully or continue patterns that create difficulties.

The enhanced framework also recognises that social systems are interconnected and organised across multiple levels. Individuals, organisations, and institutions may all influence the direction of change.

Together, these ideas provide a more detailed understanding of how social systems evolve over time. In the modules and courses that follow, we will explore each of these mechanisms in greater depth.



### Example 1 – Urban transport policy

Changes in infrastructure, public expectations, and government policy interact to shape how people choose to travel within a city.



### Example 2 – Organisational transformation

A company adopting new technologies must consider resource constraints, organisational structures, and employee expectations when implementing change.

### Provenance and Links

The Enhanced Morphogenetic Cycle builds upon the morphogenetic framework developed by Margaret Archer.

Key sources:

- Archer, M. (1995). *Realist Social Theory*
- Archer, M. (2003). *Structure, Agency and the Internal Conversation*

Extension of the framework:

- Challoner (2026), *The Enhanced Morphogenetic Cycle*

### Practical Exercise

Consider a social system you are familiar with, such as:

- a workplace
- a university
- a community organisation

Identify the following elements within the system:

1. One **constraint** influencing behaviour.
2. One **need or objective** that the system attempts to sustain.
3. One **interaction** between individuals or organisations.
4. One example of **feedback** indicating whether the system is functioning well or experiencing difficulties.

How might these elements influence whether the system remains stable or undergoes change?