

PRACTICAL VARIETY DYNAMICS

Workshop - 7 Nov 2024 ALARA Conference

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Action Learning

1. The primary purpose of Action Learning is to *influence the future*
2. The ability to *predict consequences* is essential and central to Action Learning

Experiences, knowledge, theories, understanding, communication, activities, participation and collaboration are used to help achieve the above.



Two Feedback Loop Limitation

Humans are unable to mentally predict behaviour shaped by **two or more** feedback loops

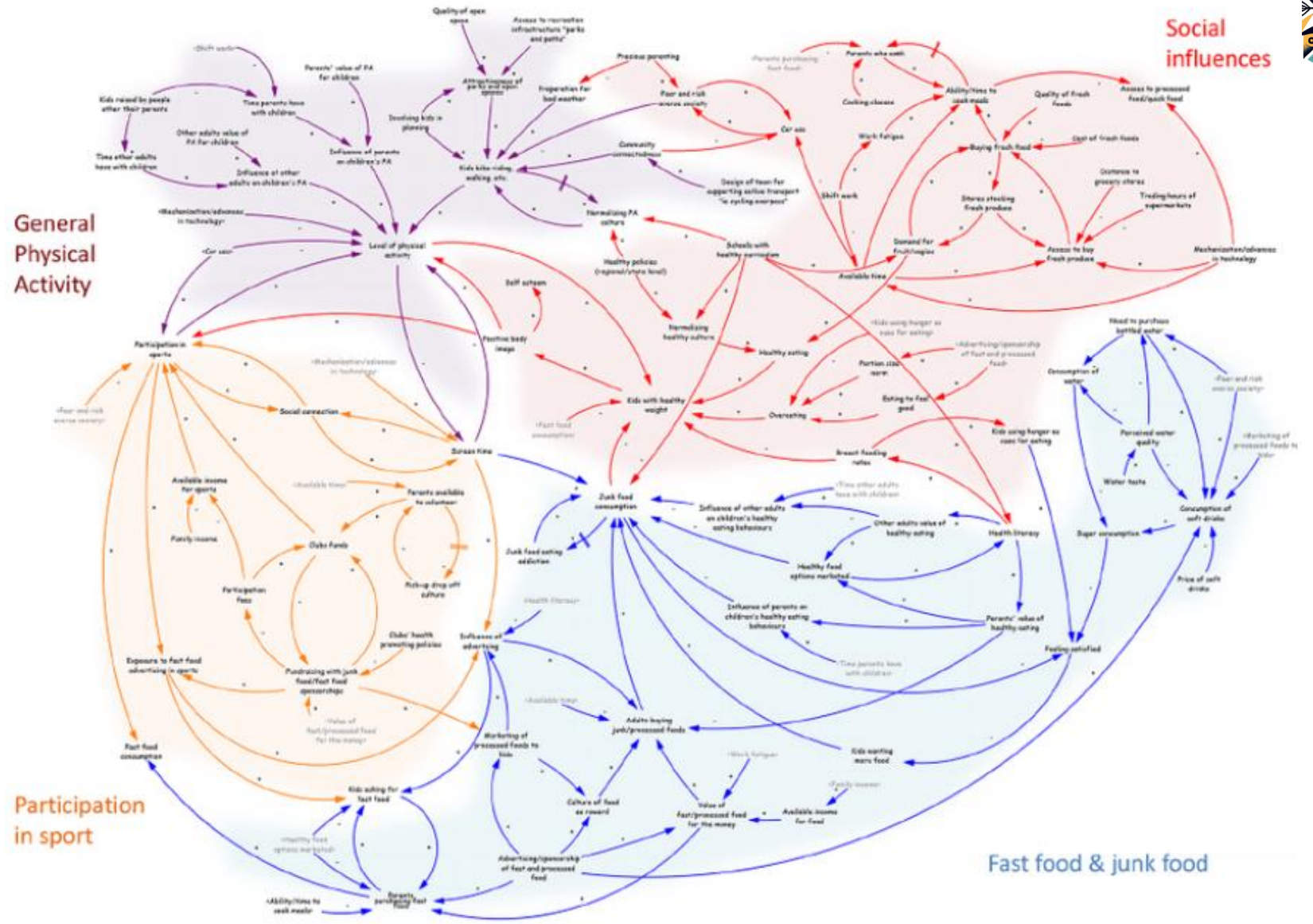


Single Feedback Loop





Multiple feedback loops



Causal loop diagram of cause of childhood obesity in community.
doi:10.1371/journal.pone.0129683.g003



Exercise

Small groups:

Identify two Action Learning topics with multiple feedback loops.



Outside conventional Action Learning and Systems Thinking



- Large numbers of feedback loops
- Coercive with multiple changing dynamics of power and control
- Asymmetric power where managers/controllers have less power
- Unresolvable conflicts between multiple key stakeholders
- Systems with discontinuous behaviours
- Systems that do not comply with the system structure assumptions



Hyper-complex situations

- System behaviours, purpose, ownerships, subsystems, subsystem relationships and control mechanisms vary continuously.
- System boundary is dynamic, does not separate system elements of interest from environment is not always owned and controlled by the system owner
- Sub-systems are not static in ownership, purpose, roles or relationships
- Control is dynamic and exerted by a variety of changing subsystems and factors some of which are outside the system
- Multiple feedback loops exist changing in structure, dynamics, purposes, existence and ownership
- Coercive situations involving multiple asymmetric power relations unaligned to subsystems
- Control and system behaviours operate outside of the variables being addressed
- Parts of system and environment are chaotic



Variety Dynamics

- **Variety** is the number of options available to any participant in a situation
- Managers must have more options (variety) than those being managed
- The control depends on the distribution of variety in the situation



Example:
Variety in
simple power
and control
context -
school



Variety available to teacher must be greater than that generated by pupils



Exercise

- What other situations depend on distribution of variety to enable control to occur?



Example: Environmental activists vs motor industry



1. Activists asked motor industry to implement strict emission control standard - motor industry refused
2. Activists persuade States to implement **different** emission control standards (i.e. increased the variety to be addressed beyond motor industry's ability to control)
3. Activists offered to resolve via a single national emission standard (reduce variety)
4. Motor industry agrees new national emission standard

Management of variety resulted in power transfer TO the activists FROM the motor industry

Variety changes were more effective than motor industry's wealth & power.



The power of Variety Dynamics

Changing variety is more effective than using force or authority

The Two Feedback Loop Limitation ensures that most Variety Dynamics strategies are effectively hidden



Example Union Negotiation Strategies



1. Management uses their authority to control staff
2. Staff increase the variety they present to management and this exceeds the control variety available to management
3. Union offers to resolve the issues for management
4. Power flows from management to union and thence to staff
5. Variety change is more effective than management authority



Exercise

- Think of a situation where you can use variety as a strategy to reduce unhelpful power of others
- How would you change the variety in the situation?
- How would that help shift power and control into your hands?



Variety Dynamics

For more information on Variety Dynamics see

<https://variety-dynamics.org>

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