

Looking at a project/initiative through a complexity lens

Teaching Notes

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Introduction

Complexity thinking reminds us that the world is essentially interconnected and changing. The reasons why certain things happen is a contingent combination of history, interdependencies, choice, chance and changing contexts. So projects do not in general slavishly follow plans or in practice have clear cause-and-effect links between differing aspects. New situations and outcomes emerge; the context may change; people may learn, may shift allegiances. The hope - of things 'going to plan', of the past being a good predictor of the future, of change being controllable and incremental, of links between inputs and outputs being simple and clear – is not well-founded in experience, and is not supported within a complexity thinking perspective.

So, if we take this perspective into account, what does it suggest we do if we are trying to design initiatives, plan projects and make things happen? In this paper we list some questions to consider, some principles to follow, when undertaking change processes and planning and implementing projects.

Complexity themes to consider

Take a systemic view

Your project may be focusing on a particular issue or theme, for example, reducing crime in Manchester. But what other issues and contexts will impinge on the issue in question – eg demography, other initiatives led by the probation service, economic decline, government policy. Even if many of these are not within your control, how might they impact your project? How may other initiatives interact with yours? How does that affect your approach?

Equally, do some of the other initiatives have goals that conflict with yours? For example, economic growth conflicts with climate change policy. How can you broker conversations which try to address conflicting goals explicitly rather than polarise and see which goal 'wins'? How can you take account the impact of conflicting goals in your thinking?

Address the issue from the standpoint of different scales

We can imagine the world existing on different scales. Individuals exist on one level and society on another. The impacts of events occurring at one level may interact and affect events at another, particularly during periods of dynamic change. Mechanical thinking acts to reduce the subject of enquiry to discrete components, and hence minimises the implications of the interactions between scales. For example, economics processes of supply and demand

are often considered as if they exist in themselves rather than are the result of the aggregation of acts of many individuals. Your project may have as its focus a particular scale – eg a city-wide initiative or national policy or change in an organisation. But, if you consider your issue both at a wider scale or a smaller scale (eg seen from the point of view of an individual), does the issue look different? Are there conflicting goals? Are there issues at levels above and below the one on which you are focused where there is instability or the potential for radical change? Does this affect your thinking and planning?

Consider timescales and variability

Sometimes the environment in which you are working is stable over time, but sometimes change can be rapid and radical. What assumptions are you making about stability over time? Are you assuming the exogenous issues are slowly changing when maybe they are not? Are you assuming all organisations of a certain type or all people of a certain type will act in similar fashion – people’s behaviour is notoriously tricky to predict? What happens to your view if you take on board the variation in any group and your assumptions re the temporal scale over which you can assume stability? Is your project flexible enough to allow some degree of personal autonomy and deviation from the path that you’ve set out?

Non-linearities and ‘noise’

Complexity theory reminds us that inter-relationships are not simple, linear, cause-and-effect links but multiple, non-linear, reflexive and evolving. Equally, so-called ‘noise’ and variation may play a part in what evolves. Does your method implicitly assume smooth changes and simple, easy-to-identify causal relationships. Can it take account of runaway change, potential collapse, unlikely but potentially very significant events or outcomes? Do you look for the unexpected? How often do you review progress? Have you built in the option of making significant changes to plan in the light of what actually happens as things are implemented? Are there variations in different places that may be relevant? Or capabilities that could become key? Or do you find seemingly unimportant events tipped the balance and can your plans change to reflect such events?

Emergent new regimes

The effect of situations being systemic, non-linear and affected by chance and variation is that, whilst in stable situations, outcomes are relatively (and beguilingly) predictable, nevertheless, where the situation is more unstable, change may result in new regimes with new characteristics and dynamics where the past is not a good indicator as to what is important, as to what may happen next; where regimes emerge with new characteristics that bear little resemblance to the old. Does your approach allow for this possibility? Can you re-focus and re-plan if such a shift occurs? Are there indicators of increasing instability both within the context of the problem and in the wider environment that indicate such a regime change could occur?

Locked-in regimes will pull you back to the centre

Although, there are times when new regimes will emerge, the majority of the time we have the opposite problem, that variation pulls you back to the centre; that however hard you strive for change, things stay pretty much the same. The pressure exerted by competing incumbent regimes will often act to blunt your ingenuity and try to make you operate in the same manner as “things have always been done”? Are you prepared to work with others and try to build critical mass that can overcome this pressure? Can you recognise when such self-balancing is unhelpful and consensus will block rather than shift such patterns?

Do you have a high-level vision?

Complexity thinking tells us that things probably won't work out the way we planned them at the micro-level, especially in the long run. Do you have a strategic vision that will act as a focal point? And who owns it? Knowing where you are, and where you're trying to get to, but not caring too much about how you get there, is a crucial skill that must be practiced. Developing shared intentions and values can shape and direct what happens but allow for local autonomy and for things not going as expected. Can you also develop processes that could allow for re-framing the vision at a later stage if outcomes and circumstances require it?

One size does not fit all

Complexity theory emphasises that each situation is unique and affected by its own particular history, context and specific qualities. To what extent does your approach assume that one size fits all, assume continuity over a variety of situations? Can it allow for flexibility and adaptability and enough local autonomy to suit the particular situation?

Conclusion

In summary, complexity theory, in considering project development suggests:

- Develop clear intentions and visions and values and then plan in detail for the short-term; as things develop, how to do the next steps will become clearer
- Review progress regularly and be prepared to re-plan in the light of what actually has happened.
- Be able to build on both unexpected successes as well as respond to unexpected failures
- Allow some local autonomy in implementing ideas, which respond to the specific conditions
- Spend time both exploring the wider context for signs of change and instability as well as reviewing the local situation for the unexpected
- Pilot if possible as things as there are often unintended consequences and issues not thought through
- Allow contingency as not going to plan is the norm!

