

GUIDES TO UNDERTAKING RESEARCH

4.6 Parkinson's Laws and Related Research

Planning Pitfalls

With project management it is important to think about what could prevent progress. As if research were not hard enough in the first place, various specific human peculiarities can combine to frustrate project advancement. A few of these, chosen from bitter experience, are briefly summarised here as cautionary warnings to those setting out on a new research project.

Parkinson's Law

The great law of bureaucracy named for its discoverer C. Northcote Parkinson, namely that "work expands so as to fill the time available for its completion". This is not disastrous in itself, but gives a warning about an odd trap often seen in project work. A time allocation may be appropriate for a project, but often a deadline it is some distance in the future so can be admired from afar. That means that for now endless discussions and meetings will be scheduled, and collaborators may not necessarily prioritise the work. When the deadline nears substantive things tend to be done, but the potential problems with this way of thinkg is self-evident.

Fredkins paradox and Buridan's Ass (or Buridans principle)

Edward Fredkin: "The more equally attractive two alternatives seem, the harder it can be to choose between them—no matter that the choice itself may matter little." A similar idea to this is the story of Buridan's ass, a poor animal that starved to death because it was sitting between two equally alluring piles of food. It can often be more important to make a decision than be paralysed making the perfect decision.

Bikeshedding

Also called Parkinson's Law of Triviality from an example given by Parkinson himself. This concerned a council committee asked to approve the local construction of a nuclear power station and a shed

for parking bicycles. The committee would take far longer to approve the bike shed than the power station, since no one really understands huge undertakings like power stations but everyone on the council has opinions on bike sheds. While a nuclear power station would be more controversial now than in the 1950s, the point is that easy trivial things can take up more time than big hard things, and we need to watch out for this.

Hofstadter's Law

"Hofstadter's Law: Complex tasks always takes longer than you expect, even when taking into account Hofstadter's Law." Everyone has encountered this.

Procrastination

Many books have been written about procrastination and how to overcome it, and everyone has their own weaknesses in this regard. If procrastination (i.e., avoiding work on a project) is a persistent problem, the first task is to recognise that it is so, and think why. Actually finding ways to overcome it is another matter but a great deal of helpful advice is available and here the internet is your friend. This is a huge subject that cannot be summarised here, but typical approaches involve dividing a task into many small tasks that are less easily avoided, good time management, examining the root cause of the avoidance and (*in extremis* of course) giving the task to someone else.

The tyranny of small decisions, and of path-dependence

This refers to the fact that lots of small decisions by many people taken for perfectly good reasons at the time can aggregate over time into something undesirable. In the same way many reasonable small actions affecting a project can result in something unpredictably bad; the ways forward for a project may be limited by decisions made in the past. Such path-dependent problems can be hard to solve without starting from scratch which is often a costly option. The key is to spot the problem early.

Unexpected developments and mission creep

Any scientific project can take a left turn, where some curious or exciting experimental result occurs that distracts from the core business of the study. This can lead to changes in the research plan and makes the mission or scope of the project larger.

This needs cautious management as it can result in missed deadlines if not brought under control. A new and unexpected observation may be an opportunity but may be a distraction. It takes some wisdom and good mentoring to tell the difference.

Unclear responsibility or accountability

Who is responsible for making sure that some key aspect of the project is done? What will keep that person honest or accountable? If there is no good answer to those questions, how can that be handled by the project leader?

Soft deadlines

Soft deadlines, i.e., deadlines that pass with little consequence, can be a real pest because no one respects them. If a project deadline is a definitive (i.e., hard) one, then deadlines agreed for the various milestones of the project have to be adhered to and usually are; thus, we cannot turn up late to an airport and expect them to wait.

In contrast, soft deadlines can be a paradoxically hard to keep on track with, and may be a big contributing factor to Hofstadter's Law. Combined with Parkinson's Law, soft deadlines can be serious nuisance.

Communication

It is important that this is timely and done well to make sure that everyone working on a project is kept informed but equally important that they are not overburdened with irrelevant material. There are now many online tools to facilitate this.

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