Project tragedies

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Invited Essay

Project tragedies

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ABSTRACT

Serious project failures can be tragedies. Borrowing the term from Aristotle, project management researchers sometimes refer to a peripety when a chaotic project suddenly finds a successful path towards completion. But Aristotle requires tragedies to have a sad ending, and in his Poetics, reversal (peripeteia) is paired with recognition (anagnorisis), which might be closer to the transitory event in chaotic projects. In late antiquity, we find a voyage described as a tragicomedy, when Synesius recounts his experiences of sailing from Alexandria. The narrative of his stormy voyage includes a turning point resembling what modern project researchers have understood as peripety.

1. Failures, tragedies

The literature analysing project failures is the poor sister of the wealth of studies devoted to project success factors. A few of the mistakes identified by Nelson (2007) when analysing 99 IT project failures remind us of ancient tragedies: unrealistic expectations, wishful thinking, and heroics. And when Nelson (p. 71) summed up that the "human tendency to underestimate and produce overly optimistic schedules sets up a project for failure by underscoping it, undermining effective planning, and shortchanging requirements determination and/or quality assurance", we are close to tragical themes.

One modern definition of the figurative, extended sense of "tragedy" is "an unhappy or fatal event or series of events in real life" (Oxford English Dictionary, sense 3). Failing IT projects are more seldom considered to be sufficiently unhappy to merit the label of tragedy. Early on, it was recognized that project type matters: construction and R&D projects fail differently (Pinto & Mantel, 1990). Nevertheless, there are IT project tragedies. A parallel with several elements of Greek tragedy was exploited by White, Wastell, Broadhurst and Hall (2010) when describing the failure of the IT systems for the UK Child Support Agency, further portrayed by King and Crewe (2013, pp. 84f). The two Boeing 737 MAX crashes, with a total of 346 dead, involved the Maneuvering Characteristics Augmentation System (MCAS), but then there is a complex issue of systems context and pilot knowledge (Johnston & Harris, 2019). Narrowly considered as a project in isolation, MCAS may have been thought of as successfully completed.

2. Under construction, after construction

Just like unfortunate IT projects, there may be construction project failures such as Boston's Big Dig (Haynes, 2008), costly as it was. However, the tendency to refer to project tragedies is usually reserved for construction projects leaving a trail of dead people; in Boston, just one person was crushed in a tunnel ceiling collapse, years after completion of this mismanaged project. Major construction projects are tenacious and reach completion with few exceptions. More than one ancient ruler planned to dig a canal through the Isthmus of Corinth, notably Nero in 67 CE who in a ceremony with trumpets took the spade himself and inaugurated the project (Dio Cassius, 1925 62.16). And the canal was opened in 1893. Two nineteenth century megaprojects, both the Brooklyn Bridge and the St. Gotthard Tunnel, were completed successfully, even though their front figures, John A. Roebling (Haw, 2020, pp. 532f) and Louis Favre (Hélène, 1882), met their tragical end on the job.

Limiting our focus to highly visible construction tragedies, these occur either during project execution or after the project has been completed. To begin with, two examples of project tragedies "under execution". The Teton dam disaster in Idaho has been labelled as a tragedy. Reisner (1993, p. 410) in his Cadillac Desert study of water supply projects in the US West included the 1976 "tragedy of the Teton dam" with eleven people dead and four thousand homes damaged or destroyed. The geological setting was unfortunate, and the reasons for the collapse of the dam are complex (Seed & Duncan, 1987). Reisner tells a lively story of how the drama unfolds. There is the project lobbying by the political editor of the local newspaper and the president

of the irrigation district, a chorus of Mormon irrigation farmers, whereas environmentalists are defeated in court. The Bureau of Reclamation, a federal agency, employs a project engineer "barely 30 years old". Unusually, there has been no attempt to build a new dam at the site. And in West Virginia, the Willow Island cooling tower collapse with 51 dead in 1978 occurred during construction: "Fifty-one workers, suspended on a scaffold supported mainly by a layer of recently poured concrete, plunged 170 ft to their death, making this the worst construction accident in American history" (Morrison, 1980, p. 68).

Construction failures with serious losses of life can occur after the structure has been built: the 1879 Tay Bridge collapsed in a violent storm and had 59 known victims, one year after being opened for trains (Lewis & Reynolds, 2002). The 1967 Silver Bridge collapse left 46 dead, having been built across the Ohio River in 1928 (Lichtenstein, 1993). Pursuing the theatrical metaphor of tragedy, more than one construction disaster has been associated with the project manager's character. The Tacoma Narrows suspension bridge collapse in 1940 after four months of operation was spectacular, as evidenced by more than 25 million video views on YouTube. It was said that the "reputation and the self-confidence of the main designer, Leon Moisseff, prevailed against what were then deemed unjustified qualms and the bridge collapsed four months after completion" (Calvi et al., 2019, p. 200). While the replacement bridge was to take the lives of three construction workers, the 1940 collapse killed only a cocker spaniel. But the Californian St. Francis Dam collapse in 1928, two years after completion, was responsible for at least 431 dead. The designer, Mulholland, together with the chief engineer for Spring Valley Water Company had been characterized in the context of an earlier partial dam collapse as being "so intensely conceited that they imagine all they might do should be immune from criticism" (O'Shaughnessy, 1934, p. 68). More recently, the Genoa Ponte Morandi, finished in 1967, collapsed with 43 dead in 2018; "Riccardo Morandi was a very unique individual and the bridge over the Polcevera river in Genoa was a very unique design case, reflecting each other" (Calvi et al., 2019, p. 199).

Although there are many project tragedies described in literature, the process descriptions have not been structured relying on traditional terms used for analysing stage tragedies. As we have just seen, character has been invoked, but Aristotle insisted that plot, which imitates action and corresponds to process, is more important than character in tragedies (Belfiore, 1992, p. 85). According to Aristotle, one component of tragedy plots is peripety.

3. Aristotle and peripeties in PM research

What follows is a critique of how project management researchers have applied the Aristotelian concept of peripety to characterize an element of the process dynamics of projects. This leads to a search for an alternative concept applicable to the phenomenon that they have described. Long dead thinkers still offer opportunities for reconsidering how project studies can be framed. Aristotle's *Poetics* provides an analytical scheme for tragedies, and at least his concept of a peripety has migrated into project management research, while not being as popular as phronesis (Flyvbjerg, 2001). Few project researchers have ventured beyond what is written about phronesis in the sixth book of the *Nicomachean Ethics*.

When examining the process dynamics of a complex R&D project, Engwall and Westling (2004, pp. 1568f) referred explicitly to Aristotle's *Poetics* when they used peripety for "a turning point, where the course of events in a play transforms into another state" and noted the "crucial moment in Sophocles (1994) *Oedipus Rex*". And in the project they studied, "this revolution was primarily driven by how the project members related to the content of the project mission […] a sudden tipping point of cumulative learning among the core engineers when occurring actions and interactions, as well as employed language and terminology, began to make sense in terms of the project mission". The mechanisms of the peripety were three: an element of abstract theory, an element of concrete experience, an element of timing. There was "a converging moment of collective sensemaking where theory about future actions as well as experiences from present demonstrations were assembled" (p. 1571). The turning point included a re-conceptualization, a recognition of what had been done.

Smith and Winter (2010) relied on three project narratives in their study of how projects are shaped: one narrative concerning product projects in manufacturing, another one concerning the setting up of a pilot IT facility, and a third narrative with a new IT system for administration in a corporate pensions office. They asserted that Aristotle used "peripety" when "the arrival of some new information transforms our understanding of what is happening on the stage […] The significance of peripety is not merely that there has been some change in fortune, a twist in the plot, or an untoward event. Something has appeared which leads to a reframing of the understanding of all that has gone before. It is not only the outcomes that are changed, but the questions that frame the project thinking and plans." (pp. 55f). They show how "the project is re-aligned to respond to a new demand 'for something that works'" in the second narrative, while in the third one "a new corporate financial agenda diverts, in its wake, the agenda of the project".

Also importing the term from Aristotle, Crosby (2014, p. [9]) affirmed that his casework covering large scale radio telescopes revealed periods in these complex projects "where a palpable state-change occurred, defined as *peripety*". A turn of events leads to "cognitive transition from ambiguousness into a less daunting state of uncertainty" where one solution becomes the obvious candidate as the legitimate path forward: a time of transition when real achievement occurred.

This is not far from how Winch and Sergeeva (2022, p. 8) reformulate peripety, as a "shift in emphasis from project shaping narratives to project delivery narratives as the project organization fills in the projected act". Here we learn about the Eden construction project, one of the Millennium projects, where the architects "soon realized that their original idea […] would not work" (p. 6), considering the ground conditions in the (operational!) clay pit chosen as the site.

Mathematically, Pinto (2022) understands peripety as an inflection point in project management theory and research. This is a mild interpretation; an example of a more Aristotelian version of peripety would be that project management researchers are suddenly struck by finding that they had thoroughly misunderstood practitioners for many years. Arguing from analogies with physical creep, Sornette and Cauweis (2015) have preferred to identify peripeteia with bifurcation as a mathematical term, referring to rupture events in socioeconomic systems. But in general, as we have seen now, project researchers have opted for a watered-down interpretation of peripety. Or is it really peripeties that they have found?

4. Anagnorisis and happy endings

Why we should take the *Poetics* seriously in research concerning temporary organizations is Aristotle's requirement of unity of action: "tragedy is mimesis of an action that is complete, whole, and of magnitude" (*Poetics*, 7.1450^{b}23–26; Halliwell's 1995 translation). From requiring unity of action, he also derives a requirement for unity of time, ideally just a single day (5.1449^{b}13), although there are ancient tragedies that certainly exceed this limit without reaching Shakespearean proportions in the chronicle plays.

For Aristotle, tragedies have three plot components: reversal (peripeteia) (11.1452^{a}22–24), recognition (anagnorisis) (11.1452^{a}29–32) and suffering (pathos) (11.1452^{b}10–13). "Reversal is a change to the opposite direction of events […] and one in accord, as we insist, with probability or necessity." Peripeteia involves actions as well as motives and beliefs; it is "the special kind of discontinuous action that occurs when the action of an agent is prevented from achieving its intended result and instead arrives at an opposite actual result" (Belfiore, 1992, p. 142f.). We may think of an involuntary action done in ignorance of the actual result.

And then Aristotle says that "Recognition […] is a change from ignorance to knowledge, leading to friendship or to enmity, and involving matters which bear on prosperity or adversity." He goes on to assert that the finest recognition is that which occurs simultaneously with reversal, taking *Oedipus the King* as an example. Moreover, recognition is also said to occur "after a fashion, in relation to inanimate and even chance things, and it is also possible to recognize that someone has or has not committed a deed" (11.1452^{a}33–36). As MacFarlane (2000) reads this passage, recognition is a question of recognizing someone, although it could be by means of inanimate signs or tokens. Sophocles makes recognition and reversal coincide in the case of *Oedipus the King*, but in other tragedies they can occur separately and not always are both present.

What we find in project management research when peripeties are invoked is confusion replaced with an electrifying view of the end result, and smooth realization of project objectives follows. Somehow, this is closer to recognition than to reversal, in spite of being recognition of a project path rather than looking backwards in time and recognizing the identity of an individual. Although the meaning of recognition has been extended in twentieth century literary criticism, F.L. Lucas and Northrop Frye having been influential (Cave, 1988, pp. 184, 195), it might be unwise to depart further from Aristotle.

A project with a happy ending has little in common with *Oedipus the King*, which is Aristotle's prime example of a good tragedy. But then it should be noted that like many writers on project management, Aristotle balances between descriptive and normative approaches in the *Poetics*. Actually, a number of the 33 preserved Attic tragedies, such as Euripides (1994) *Alcestis*, have happy endings (Wise, 2008), although Aristotle requires a sad ending (13.1453^{a}13). When a tragedy ends happily, it is typically due to divine intervention at the very end. If not a god, a *deus ex machina*, then at least Heracles resolves a plot that is stuck, as in Sophocles (2018) *Philoctetes*. But Aristotle (15.1454^b) dislikes the rescue of a plot through a sudden irrational appearance of a god. And when it does occur in the final scene of a tragedy, there is no subsequent chain of events left of the plot, and thus the context does not resemble a mid-project crisis.

5. Epiphanies, serendipity?

If it is not entirely satisfactory to understand as recognitions what project management researchers have called peripeties, should we be inspired by gods intervening in tragedies and consider epiphany as a helpful alternative concept? In antiquity, epiphanies implied an appearance or revelation of the divine. James Joyce revived the concept in the early twentieth century, formulating a definition in his posthumously published *Stephen Hero*: "a sudden spiritual manifestation, whether in the vulgarity of speech or of gesture or in a memorable phase of the mind itself" (Joyce, 1944, p. 216). Van Iterson, Clegg and Carlsen (2017) go much further than the individual sudden experience and wish to link epiphanies to organizational life, in addition emphasizing the importance of physicality of epiphanies. The problem with extending the interpretation of epiphany to cover project transitions is that projects require effort and when still in a chaotic phase, they imply suffering.

The same reasoning is even more pertinent if serendipity is tried as another candidate for understanding turning points in projects. Serendipity is thought to be an accidental discovery, effortless, an unsought finding (Van Andel, 1994), which should rule out an application to transitions in hard working projects, although occasionally noted in the project management literature (Cunha et al., 2010).

6. A tragicomic voyage

Returning to the examples of how peripety is used in project management research, we can find a rare parallel from Late Antiquity of tragedy figuratively applied to real world experiences. Among the letters written by the philosopher Synesius, there is a long one, the fifth, describing a voyage westwards from Alexandria around 400 CE. Bad winds led to chaos aboard with passengers ultimately considering suicide as preferable to shipwreck. Attempts to persuade the captain not to sail further from land led to him uttering from his platform the most violent curses "as a tragical actor" (Kahanov, 2006, thinks that the captain knew what he was doing and that Synesius was wrong). Eventually, the storm calms, land comes into sight, and they anchor off the beach. Everybody was grateful and happy for having survived, but it soon emerged that this part of the coast was a roadless desert area. After two days, they decided to set sail again; there is a second storm, but ultimately it settles; and then an old pilot rows out to the ship and guides them into a small safe harbor, where plentiful provisions can be had. "This drama, from tragic to comic, was arranged by the deity." Here, Synesius acknowledges Aristotle's ideal requirement of sad endings for good tragedies.

Why did Synesius make the effort to provide his brother with a detailed narrative shaped as a drama? This was certainly done as is the case of his many other letters with an eye to a wider readership. Synesius was a well-known philosopher and community leader, and publication served to bolster his image. A modern skipper narrative has been recounted by Enninga and van der Lugt (2016, p. 108). Intending to build group dynamics, one of their innovation project leaders used the metaphor of a boat, appearing as the skipper of a raft: "We are sailing to New York, but don't ask me how." "And we never expected the unexpected." For two months, the project leader "had the feeling: Guys, this ship is going down". And later: "we had passed this point of no return", and in the end, they had made it. A drama unfolds within his voyage metaphor, whereas for Synesius, it was a real-life voyage narrated within a stage tragedy metaphor.

7. Conclusion

If following Synesius, we should acknowledge that at the precise moment when the solution path for an intractable project appears in sight, the tragedy ceases. A comedy starts. Aristotle would have agreed: it is not the peripety of the voyage. His concept of recognition seems more appropriate than peripety, but still not satisfactory. We should be wary of applying his tragedy terms to projects that are successful. But what remains to be done is analysing the processes of serious project failures, relying on his framework.

Can we then find a better term for the phenomenon identified by project management authors who have used "peripety"? They have also provided many near-synonyms: change, converging moment, freezing point, inflection point, metamorphosis, re-alignment, reframing, revolution, shift, state-change, tipping point, transformation, transition, turnaround, turning point. Practitioners can be excused if they feel bewildered. A turning point is a point where a decisive change takes place. Turning points seem a good choice with a reasonable chance of being understood, but only if it is spelled out what goes before and after the turning point.

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