Path-dependency

1. Definition

Path-dependencies are defined as developments in which a situation or decision predetermines future development; present-day decisions might thus limit the range of options for future decision makers.

2. Example

Big infrastructural works for mobility or energy production provide the clearest contemporary examples of decisions that create path-dependency. The building of a nuclear power station creates a legacy not only of dangerous nuclear waste that will need to be safely stored for thousands of years, it also predetermines social processes and power relations. The specific risks associated with the management of a nuclear power station in critical situations may require rapid expert intervention and quick decision-making that bypass democratic decision-making processes. The decision to build a nuclear power station can thus be said to create multiple – technological, environmental, social and political – path-dependencies.[54]

Cities located at the water are particularly vulnerable to decisions that create path-dependencies. Bridge heights, for instance, will limit the scale of vessels that can pass under them; the entry points and size of tunnels can define ingoing and outgoing traffic, and everything that builds up in connection with such traffic, for generations.

A literal example of path-dependency can be seen in the development phases of the Kajaani Castle in Finland, one of the northernmost medieval castles in the world. The castle developed on the location of an island in the Kajaani river, with a bridge connecting both riverbanks and the island. Gradually, the surroundings of the castle saw the development of a small city, split in two by the river. Technological advances in the twentieth century meant that a modern bridge connecting both parts of the city could easily have been built in other locations than the one provided by the island crossing. The modern bridge and motorway from 1937, however, closely follow the late medieval path, cutting through the historical fortress (see figs. 11 a/b).

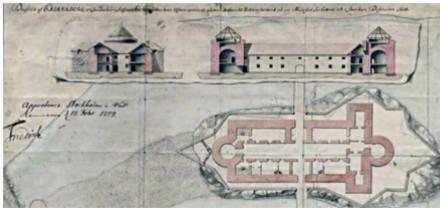*Fig. 11a: Kajaani Castle in a drawing from 1729. Krigsarkivet, Stockholm.*

Fig. 11b: Ruins of Kajaani Castle with modern bridge (built in 1937).

Source: https://commons.wikimedia.org/wiki/File:Cajanaborg.jpg

Image by Henrik Jansson

3. Explanation

If one assumes that the built environment shapes social processes just as social processes shape the built environment[55], it is clear that planning decisions – especially if they are decisions which either create long-term structures or which generate technological lock-ins – have long-term consequences for the living conditions in cities. Just as decisions for technological standards in markets with a need for a systemic fit of different components create technological lock-in (think DOS vs. Mac or the printer market), planning decisions create

path-dependencies which impose on future generations the consequences of blind spots or short-sightedness at the time of making the decision. A case in point is the decision in cities worldwide in the 20th century to plan cities around individual automotive mobility at a time when environmental degradation, climate change, or geopolitical considerations with regard to fossil fuel dependencies were not an active issue. This created path dependencies in terms of functional zoning, the use of space, (dis-)incentives for living in the city or in suburbs, environmental developments, urban public health and a range of other fields. A crucial issue for contemporary planning is the question what future generations will recognize as present-day blind spots, limitations or unquestioned pre-occupations and which path-dependencies they will have led to.

Insights into the limitations of planning in recent decades have further highlighted the need to consider path-dependencies in urban planning: this is true both for insights into the role of emergence – spontaneous, unplanned (and unplannable) processes in urban development – as well as for the more general insight into the limits of planning and into the constraints of planning in and for conditions of uncertainty.

From the perspective of literary and narrative studies, path-dependency is bound up with the way in which beginnings set the stage for particular storytelling patterns to develop. The way a particular plot is set out in the beginning of a narrative – including planning narratives – can be called "inaugural emplotment": the almost prophetic, suggestive, and forward-looking manner of positioning a particular spatial setting within narrative developments that take on an aspect of inevitability.[56] Specific modes of emplotment – for instance comedy, tragedy, satire, or romance[57] – with their generic implications as well as central tropes and references to established patterns of narrative sense-making – can be said to suggest or even determine specific path dependencies, outcomes, inclusions and exclusions. Plans that emplot the development of a neighbourhood in explicitly stated terms of 'realizing its potential', 'finding a voice', 'coming to be integrated into the city', for example, can be linked to the genre of the *Bildungsroman*.

4. Applications

Just as certain plot patterns can create a type of narrative path depen-
dency by strongly suggesting specific outcomes, some metaphors –
often unintentionally or even against the most likely intended logic
of a planning text – can suggest narrative patterns, again with asso-
ciated outcomes, inclusions and exclusions. For instance, the com-
mon notion of specific groups – artists, students, members of the
LGBTQ community – as so-called pioneers on the frontier of urban
revitalization, can be shown to actualize the implications of the fron-
tier trope by raising the question who the ostensible 'hostile native
Americans' implied in this trope might be, suggesting potentially di-
visive and agonistic patterns in urban development as well as pat-
terns of inclusion and exclusion. Research on such patterns relies
on recent developments in cognitive science and their repercussions
in literary and cultural studies, which have foregrounded the power
of figurative thought and the way in which cognitive models guid-
ing thought and behaviour rely on figures of speech and thought. In
attempts at securing socially integrative planning, attention to the
implications of the chosen metaphor or narrative patterns and their
suggested path-dependencies can be vital to detecting and avoiding
unintended or counter-intuitive suggestions.

More generally, insights into the role of path-dependencies for
planning and insights into the limits of planning have contributed
to what might be referred to as a new modesty in planning after the
perceived failure of many high-flying plans in 20th-century planning
(for instance, large-scale modernist planning in the wake of Le Cor-
busier). This more modest type of planning seeks to limit path-de-
pendencies by allowing for reversible planning decisions. The city
of Portland, Oregon, has often been credited with pioneering such
planning principles in the early 2000s.[58]

Similar to our remarks in the context of "Closure", where we sug-
gested the possibility of more open endings in planning narratives,
it would be beneficial to think of narrative beginnings – and the
metaphors and modes of emplotment planners use in beginnings –
in planning and policy in terms of possible path-dependency, with
the aim of retaining an openness for multiple pathways.

Related entries: Closure, Emplotment, Genre, Scenario, Scripts

Further Reading

Gurr, Jens Martin. "Narrative Path Dependencies: From Scenario Building in Literary Texts to the Narratology and Rhetoric of Pragmatic Texts." Gurr. *Charting Literary Urban Studies: Texts as Models of and for the City*. New York: Routledge, 2021. 125–140 [open access, https://doi.org/10.4324/9781003111009].

Hein, Carola, Dirk Schubert. "Resilience and Path Dependence: A Comparative Study of the Port Cities of London, Hamburg, and Philadelphia." *Journal of Urban History* 47, no. 2 (2021): 389–419.

Pierson, Paul. "Increasing Returns, Path Dependence, and the Study of Politics." *The American Political Science Review* 94, no. 2 (2000): 251–267.