Dilemmas in a General Theory of Planning

Wicked Problems

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Pop Quiz!

1. When was this paper written?
2. Why am I asking the above question?
3. Were there no wicked questions prior to this time?

The times, they are a changin’ -Dylan, 1964

- 1950s
  - Post Industrial
  - Massive increase in government programs
  - Suburbanization of (white) America
- 1960s and 1970s
  - Feminist movement
  - Civil Rights movement
  - Anti-War movement

“the nation was buffeted by the revolt of the blacks, then by the revolt of the students, then by the widespread revolt against the war”

Public distrust

Of professionals? Of the institutions they represent?

RIDGEON [looking after him] Poor chap! [Turning to Sir Patrick] So thats why they made me a knight! And thats the medical profession!
SIR PATRICK. And a very good profession, too, my lad. When you know as much as I know of the ignorance and superstition of the patients, youll wonder that we're half as good as we are.
RIDGEON. We're not a profession: we're a conspiracy.
SIR PATRICK.

> **All professions are conspiracies against the laity.**

And we cant all be geniuses like you. Every fool can get ill; but every fool cant be a good doctor: there are not enough good ones to go round. And for all you know, Bloomfield Bonington kills less people than you do.
RIDGEON. Oh, very likely. But he really ought to know the difference between a vaccine and an anti-toxin. Stimulate the phagocytes! The vaccine doesnt affect the phagocytes at all. He's all wrong: hopelessly, dangerously wrong. To put a tube of serum into his hands is...

The Doctor's Dilemna -George Bernard Shaw, 1906

What should these systems do?

Starting in the 1960s, approaches began focusing on a *desired outcome*. A novel approach at the time, as opposed to "What do they do?" or "How can we build them?"

- Systems analysis
- Goal-finding as a planning tool
- American Government adoption of Planning, Programming and Budget Systems (PPBS)

Redefine the problem

= win?

it’s not just about efficiency anymore

A glimmer of hope?

Simultaneously functioning governing process consisting of:

- on-going, cybernetic process of governance
- incorporate systematic procedures for continuously searching out goals
- identify problems, forecast changes
- invent alternative strategies
- stimulate alternative action sets and consequences
- feed information back to simulation and decision channels
- and on and on….

Sorry. No.

- “And yet we all know that such a planning system is unattainable, even as we seek more closely to approximate it”

Planning Problems are Wicked Problems

Tame problems are for

- scientists
- engineers
- this lady
- chess players

Planning Problems are Wicked Problems

Wicked problems are for

- planners
- this guy's face
- us?

(tame)

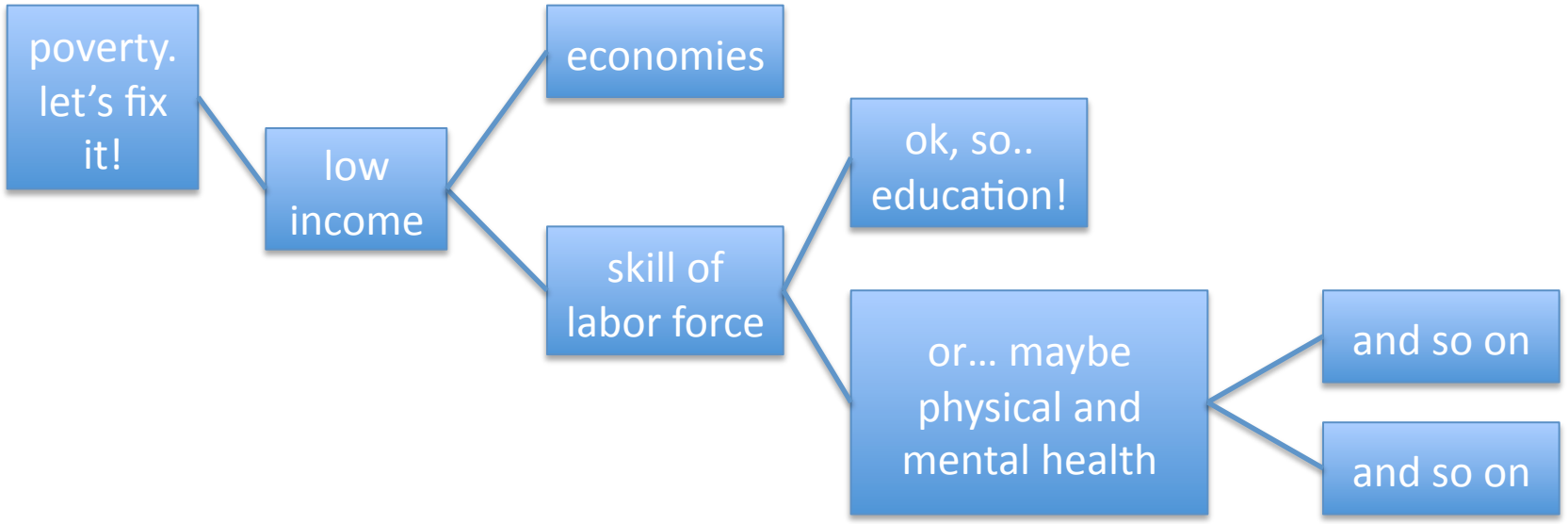
So, what makes a problem wicked?

Characteristics of Wicked Problems

1. There is no definitive formulation of a wicked problem.
2. Wicked problems have no stopping rule.
3. Solutions to wicked problems are not true-or-false, but better or worse.
4. There is no immediate and no ultimate test of a solution to a wicked problem.
5. Every solution to a wicked problem is a "one-shot operation"; because there is no opportunity to learn by trial-and-error, every attempt counts significantly.
6. Wicked problems do not have an enumerable (or an exhaustively describable) set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan.
7. Every wicked problem is essentially unique.
8. Every wicked problem can be considered to be a symptom of another problem.
9. The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution.
10. The planner has no right to be wrong (planners are liable for the consequences of the actions they generate).

1) There is no definitive formulation of a wicked problem

Formulating the problem is wicked in itself.



2) Wicked problems have no stopping rule.

Tame:

6x + 5 = x -3 = solvable

- Everyone can agree when an answer has been found

Wicked:

Let's make a better donut

- Clearly there can be no definitive answer to a problem
- Stopping is due to external factors – I'm too hungry to work on this any longer

3) Solutions to wicked problems are good-bad

- Any solution will fall onto a spectrum
- There are no objective standards
- Disagreements are inevitable
- Stark contrast to “right-wrong” questions

4) There is no way to test solutions!

Any solution will generate waves of consequences

These waves can generate their own waves

5) There's no trial and error – every attempt counts

Yeah, well, I thought we would **just put this road here,** and then… What? No, **they're not important** – we'll knock them down. Yeah. Me too. **I love that part.**

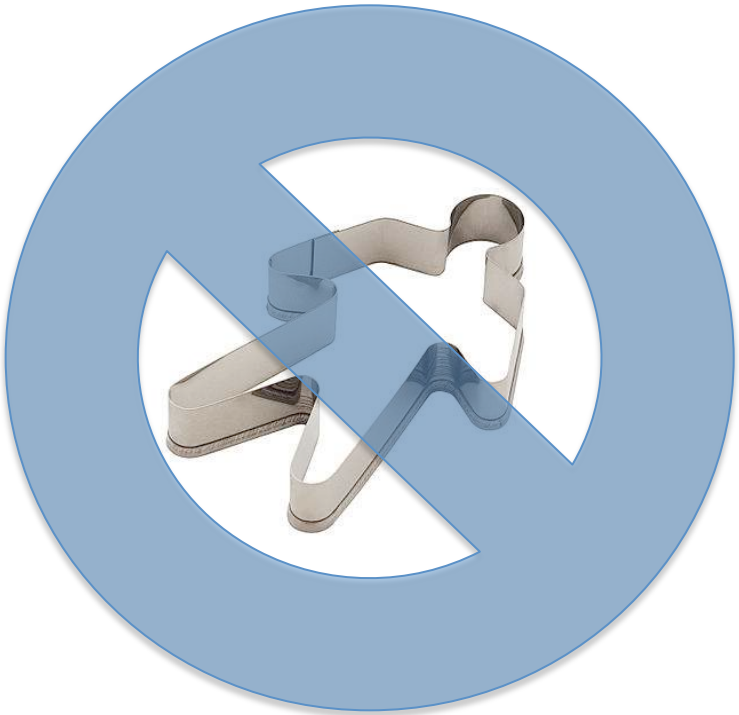
6) We cannot list all possible solutions or methods

- How can we lower crime?
  - disarm the police
  - change laws: “that’s not illegal anymore!”
  - moral rearmament, no more police/courts
  - shoot all criminals
  - give loots to crooks

- Judgment calls are necessary!

7) Each problem is unique

- Every planning scenario will ultimately have its own unique concerns.



8) Every wicked problem is a symptom of another problem

- Crime in the streets as a symptom of

None of these explanations are wrong, but curing the symptom may not be possible, nor a goal of the project

9) Our choice of explanation determines how we will try to solve

moral decay	permissiveness	deficient opportunity	too few police	poverty

People's attitudes determine the choices they make.

The choice one makes from the list above will determine their approach to solving the problem of crime in the streets

10) The planner has no right to be wrong

(ruh roh!)

The potential impacts of “wrong” decisions are very far reaching! These decisions affect people’s lives

Planners do not have the scientist’s luxury of hypotheses and tests

Case study: East Liberty, 1960s

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A Neighborhood's Decline

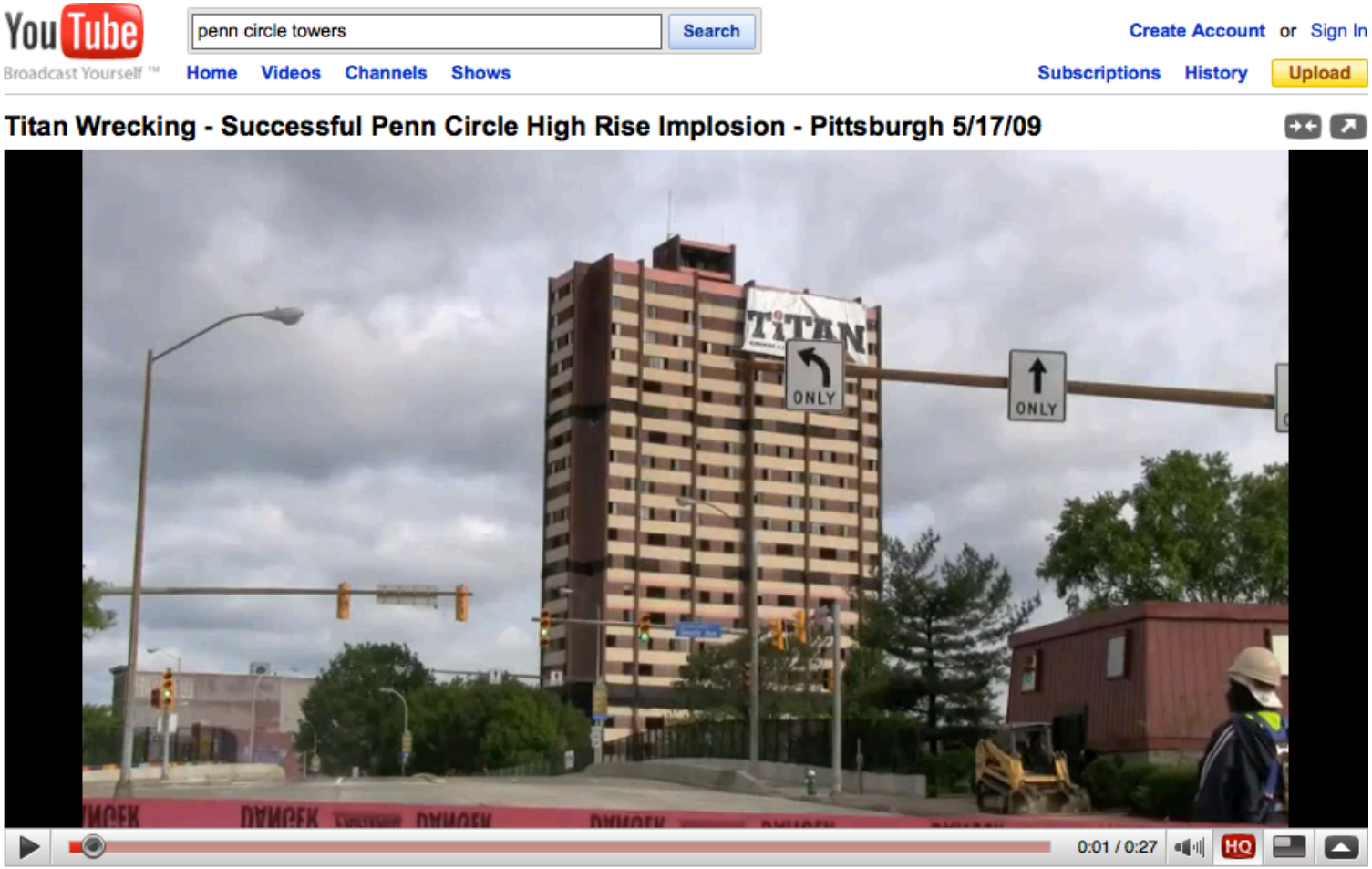
- As residents move to suburbs and shopping malls thrive, merchants fear for East Liberty's status as a market center
- City of Pittsburgh's Urban Redevelopment Authority (URA) asked to take action – demolition begins to create additional commercial space
- Pittsburgh Housing Authority gets in on the action. Three 20 story housing complexes built to create housing for African American community
  - Recent URA creation of Civic Arena destroys African American housing in the Hill District
  - African Americans currently live in overcrowded nearby neighborhood of Homewood
- New traffic patterns direct vehicles away from shopping areas
- New housing towers gain reputation as crime centers

Case study: East Liberty, 1960s

- wiki says: “These two measures ultimately failed to preserve East Liberty as a market center, and arguably hastened the old neighborhood's demise. In the span of just a few years during the mid-1960s, East Liberty became a blighted neighborhood.” “… the captive audience that remained in what was now an urban ghetto.”

- Last of the three towers demolished as neighborhood revives, 2009

Blow stuff up here



That's all just for planners, right?

- **Jeff Conklin**
- Seeking to generalize the concept of problem wickedness to areas other than planning and policy, Conklin identifies the following as defining characteristics of wicked problems:

1. The problem is not understood until after the formulation of a solution.
2. Wicked problems have no stopping rule.
3. Solutions to wicked problems are not right or wrong.
4. Every wicked problem is essentially novel and unique.
5. Every solution to a wicked problem is a 'one shot operation'
6. Wicked problems have no given alternative solutions.

from wikipedia

welcome to the wicked world

Sources

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  http://en.wikipedia.org/wiki/East_Liberty_%28Pittsburgh%29
- Wikipedia entry on Wicked Problems
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