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The Context of Wicked Problems

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Not all problems are created equal.

Likewise, not all planning problems are created equal.
And not all design problems are created equal.

Some problems are **wicked.**

Wicked = Complex ?

Sometimes people understand “wicked problems”
to mean especially complex problems.

This view is correct, as far as it goes,
but misses some of the point.

Wicked = Ill-defined !

Rittel used wicked in the sense of “malignant,” “vicious,” “tricky,” “aggressive,” or “incorrigible”—and contrasted “wicked” with “tame” or “benign.”

A short-hand of problem types:

Simple problems:

The goal is specified.

Complex problems:

We must agree on the goal.

Wicked problems:

We cannot agree on the goal.

A short-hand of problem types:

Simple problems:
The goal is specified. A school assignment.

Complex problems:
We must agree on the goal. A business discussion.

Wicked problems:
We cannot agree on the goal. A political debate.

"The problems that scientists and engineers
have usually focused upon are mostly 'tame' or 'benign' ones.
As an example, consider a problem of mathematics,
such as solving an equation;
or the task of an organic chemist in analyzing
the structure of some unknown compound;
or that of the chess player attempting to accomplish
checkmate in five moves.
For each the mission is clear.
It is clear, in turn, whether or not the problems have been solved."

— Horst WJ Rittel and Melvin W Webber

"The kinds of problems that planners deal with—
societal problems—are inherently different
from the problems that scientists
and perhaps some classes of engineers deal with.
Planning problems are inherently wicked."

"Wicked problems . . .
include nearly all public policy issues."

— Horst WJ Rittel and Melvin W Webber

Criteria for identifying wicked problems:

1 No definitive formulation
2 No stopping rule
3 Solutions are not true-false but good-bad
4 No immediate and no ultimate test of a solution
5 Every solution is a “one-shot operation”
6 The set of potential solutions cannot be enumerated
7 Essentially unique
8 A symptom of another problem
9 Choice of explanation determines the resolution
10 The planner has no right to be wrong

— Horst WJ Rittel and Melvin W Webber

Principles for taming wicked problems:

1 Diverse backgrounds are required
2 Maximize involvement
3 Every step is a judgment
4 Reasons for judgments should be made explicit
5 The process cannot be “objective”
6 The planner is a facilitator
7 Casting doubt is a virtue
8 Activism and optimism are required
9 Risk should be shared widely
10 The process is argumentative

— Horst WJ Rittel and Melvin W Webber

Rittel renounces notions that design is objective;
he casts it as subjective and pluralistic.

He casts **design as argument,**
frames design as a branch of **rhetoric,**
and fixes design within the realm of **politics.**

“Dealing with wicked problems is always political.”

“. . . planning . . . is always political . . .”

“the designer . . . takes sides.
Designing entails political commitment,—
although many designers would rather
see themselves as neutral . . .”

— Horst WJ Rittel

Of course, the idea of “wicked problems” arises at a specific time—in a specific context.

Rittel explicitly connects **“wicked problems”** to the idea of a **“second generation”** of planning.

Rittel offers second-generation planning as a way around the issues inherent in first-generation planning.

The first generation of planning arises after WWII.
It **applies** methods developed during the war—
(e.g., measures of efficiency)
methods appropriate to military problems—
to social problems.

First-generation planning mistakes social problems—
which are wicked—
for simple military problems,
problems which are well defined.

In many cases,

first-generation planning led to disastrous results:

– so-called urban renewal
– interstates splitting urban neighborhoods
– Soviet-style high-rise housing for the poor

Issues began to pop up very quickly,
provoking reaction
from the public and from “experts.”

Two of the four founders
of the design methods movement,
Christopher Alexander and John Chris Jones,
repudiated design methods.

With the formulation of “wicked problems,”
Rittel offered a subtle diagnosis of the issues
and a prescription for a cure.

Unfortunately,
the idea that "design is political"
still comes as news in many design schools
and **is not a core tenet of design curricula.**

The “problem” in “wicked problem” is problematic and suggests a unitary nature.

Perhaps we need a new word.

“Tangle” suggests the messy inter-connected nature of the many variables and dimensions entailed in wicked problems.

By definition, no individual can hold in mind
all the variables, dimensions, and connections.

The required knowledge is necessarily distributed.
Resolution emerges from a peer network—
through conversation,
through information exchange,
through a political process.

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Presentation posted at
www.dubberly.com/presentations/rittel.pdf