

Wicked Problems: Implications for Public Policy and Management

by Brian W. Head and John Alford

keywords:

[wicked problems](#) [complex problems](#) [complex problems](#) [new public management](#) [new public management](#) [problem solving](#) [problem solving](#) [collaboration](#) [risk and uncertainty](#)

Introduction

- "Wicked problems" - those that are complex, unpredictable, open ended, or intractable. Wicked problems seem incomprehensible and resistant to solution.
- Article adopt a hopeful stance in respect of wicked problems based on decomposing their challenging features into more nuanced categories and seeking to understand those governmental factors that make them especially difficult for policy makers, public managers, and policy scholars to address.
- Conclusive "solutions" are rare, it is possible to frame partial, provisional courses of action against wicked problem.
- Explain and assess some strategies for tackling wicked problems, each encompassing a variety of alternative approaches.

The Nature of Wicked Problems

- Complex policy problems, in areas of risk and uncertainty emerged in 1970s
 - Rational-technical approaches to decision making, planning, and implementation.
 - *Rational-technical approaches* assumes the efficient and effective achievement of objectives can follow from adequate information, carefully specified goals and targets, and choice of appropriate methods.
1. *Perspective of Systems theory* : social and economic problems cannot be understood and addressed in isolation
 2. *Value perspectives* : social issues of modern life are grounded in value perspectives. Scientific analysis is insufficient to understand and resolve major problems (Rein, 1976)
 - [Technical rationality](#) (기술합리성) could not come to grips with the professional norms and practical knowledge of those who provide valued services to individual clients experiencing real problems.
 3. Critique of *Expert-driven rational comprehensive planning*
 - *Pluralistic society*, not amenable to top-down general solutions
 - Social groups exhibit important differences in aspirations, values, and perspectives that confound the possibility of clear and agreed solution.
 - [Dilemmas in a General Theory of Planning](#) (Rittel and Webber, 1973)
 - Engineering approach problem solving has ended.
 - Modern society is pluralistic, rather than homogeneous
 - Not enable to top-down general solutions.
 - Different Aspirations, Values, Perspectives confound the possibility of clear and agreed solution.
 - Modern social problems are "ill defined", rely on political judgement rather than scientific certitudes.

Challenges of Wicked Problems

큰정부 vs 작은정부

- The role of the modern state has expanded, and the proper role and the scope of the government.
- Reduce 'overloaded role of government', lower community expectations about the capacity of governments to address a wide range of major issues
- public regulation이 아니라 individual과 communities 에게 책임을 부과.
- 더 최근에 와서는, political leaders determine to undertake large initiatives to address complex problems.

Q) Wicked problem은 대개 각 parties들의 이해관계 충돌과 그에 따른 결과가 어떻게 발생할지 알기 어렵기 때문에 problem definition과 solution을 제안하기 어려워지는 문제로 보임. 때문에 Complex problem에 대해서는 조율자로서의 정부기관의 역할이 더욱 중요하다고 생각함.

Dealing with disaster and crises

- Wicked problems to Prepare, coordinate, rapidly mobilize resources.
- Nontraditional, Adaptive, Networked strategies to address nonroutine problems.
- The argument that exceptional events, may require new types of policy response may be more plausible.
 - [Complexity](#)
 - [Interconnectedness](#)
 - [Pluralism](#)
 - [Uncertainty](#)
- Emerge of Value difference (Roberts, 2000)
 - expansion of democracy
 - Market economies
 - International travel
 - Social exchanges
- No root cause of complexity, diversity, uncertainty, and ambiguity.
- No single best approach to tackling problems.

Fundamental cause of Wicked problems Example

Stakeholder disagreement

--> Solution: *reducing conflict through dialogue*

- Favor participatory and dialogue-based approaches to goal setting, planning, and strategizing.

Q) 보통 Stakeholder disagreement에 따른 dialogue는 compensation으로 발전하기 쉽다고 생각됨. 보다 효용성 있는 dialogue에 대한 탐구가 필요함. 특히 최종 결정권이 어느 파티에 있어야 하는지가 고려되어야 함.

Insufficient knowledge about social processes

--> Solution: *further research and data collection*

- Fill knowledge gaps and improve the information base for decision makers and stakeholders
Problem definition imply a preferred solution.
- [Social pluralism](#): Multiple interests and values of stakeholders
- [Institutional complexity](#): the context of interorganizational cooperation and multilevel governance
- [Scientific uncertainty](#): fragmentation and gaps in reliable knowledge

Complexity, Diversity, and Uncertainty

Problem situations

- *Tame problem*
 - [Tame problem](#) Currently regarded as capable of standard or routine solutions.
 - Low level of complexity and disputation
 - Type 1: Definition of the problem & Solution are clear to decision maker.
- *Wicked problem* : more controversial or more complex.
 - Type 2: Definition of the problem is clear, but Solution is not.
 - Type 3: Both problem & solution are unclear.

Problem & Solution

- Institutional history and stakeholder perspective shapes problem and solution. (Kingdon, 1995; Sabatier, 2007)
 - Constrained or bounded rationality
 - Lack of consensus differences in values and experiences
- Secure knowledge is challenge of dealing with ambiguity, uncertainty, and value disagreements
 - e.g.) [cognitive-analytical challenge](#)
 - communicative, political, and institutional challenges to building a more shared understanding.

- The more [actors](#), [groups](#), and [organizational units](#) involved in a complex issue increases, the need for high-quality management and leadership processes become more crucial. (Colkin, 2006; Feldman & Khademian, 2007)
 - [Actors](#) may have divergent interests or values that prompt them to be in conflict about the nature of the problem and how to deal with it.
- The more complex and diverse the situation, the more wicked the problem.
 - Complexity and diversity create higher levels of uncertainty or ambiguity
 - Institutional arrangements
 - Group behavior
 - Ideologies
 - Issue histories
 - Research findings
 - Media biases
- Public sector managers and policy analysts establish enabling conditions, whereby provisional solutions can be discussed and decided.
 - Public decision makers claim to offer solutions to wicked problems by redefining them or by advocating a preferred policy instruments such as markets to handle some of the trade-offs.

Public Management's Shortcomings in Dealing With Wicked Problems

- Tackling wicked problems is challenging not only because of their inherent complexity but also because the mechanisms of public-sector management tend to complicate and hamstring efforts to resolve such issues.

Hierarchy of Public administration

- *Triaditional hierarchical forms of public administration* have not been conducive to grappling productively with wicked problems.
 - *Hierarchical forms* of organization and systems of control, focused on input monitoring and process compliance.
 - Limit the opportunities to think expansively about policy issues of the type that might be thrown up by wicked problems.
 - The tendency of recruit administrative employees at entry level and retain them in the same organization, and to foster specialization in areas of professional expertise made each department a cultural fortress.
 - > Cultural Silos or Stovepipes

Q) 우리회사의 경우, 순환근무를 통한 직부 전환이 필수적인 정책으로 있음. 타 직부에서 근무를 통해 현장, 관리, 행정 업무를 경험할 수 있음. 다만, 3~4년씩의 순환근무체계는 Expert가 아니라 Manager를 키우기에 용이한 환경으로, 각 지부의 경험을 반영하는 것은 용이하지만 실제 일을 할 수 있는 사람이 적어진다는 단점이 있음.

이를 해소하고자 매니저로 성장하는 직군과 현장 expert가 되기 위한 직군을 구분해두었지만, 각 직군간의 차이로 인한 불균형이 발생하기도 하며, 곧 직부를 이동할 사람이라는 관점으로 업무에 임하는 등의 문제를 내재하고 있음.

특히, 공공정책 등의 전문성이 필요한 분야에서는 조직원 개인의 위치를 이동하는 등의 방법으로는 전문성을 키우기 쉽지 않을 것으로 예상됨. 공공기관에서는 관리론을 어떤 형태로 발전시켜야할지 논의해보고 싶음.

- Budgetary process that featured line item appropriations of inputs.
- *Muddling through approach*, that could not address the big issues in a comprehensive way
- *New Public Management(NPM)*, in 1980s, could not resolve wicked problems.
 - Intraorganizational focus - Managerialism or corporate management
 - contractualist focus entailing purchaser-provider splits, outsourcing, and privatization

Decision-making approaches: Managerialism

- [Managerialism](#): Managing for results

- Public-sector organization's structure, coordination mechanisms, financial management, staffing, and rewards toward the achievement of results, broadly conceived as either sets of program purposes or as groups of people served by programs.
- Multidivisional form of leading private-sector corporations, with various business units, controlled through setting and monitoring performance outcomes.
- **Central to managerialism** has been a rational-technical approach to making decisions, adopting corporate strategy methods from the private sector.
 - Each public organization has
settled goals
a supportive political environment
control over the resources
capabilities necessary to deliver on the goal
--> None apply in the presence of *wicked problems*

The structure and process of decision

- Managerialism allows flexibilities in find alternative means of achieving the desired results.
 - Managers responsible for a specific set of programs
 - The corporate management framework tends to isolate from each other those programs that may actually have subterranean connections in respect to certain wicked problems.
- [Fragmentation](#) (단편화, 분할) manifests itself...
 - Program-based subcultures, competing policy priorities, turf wars within and between agencies.

Fragmentation as contractualism

- Fragmentation was intensified by [contractualism](#) (계약론, 계약주의)
 1. Contract-based service-delivery models tended to shift the focus back along the program logic chain.
 2. Contractualism entailed separating service-delivery functions from those devoted to formulating policy, deciding what services were needed, and arranging with providers to deliver them.
 - *Policy-Delivery separation, or Purchaser-Provider split*
 - Providers: private-sector firms, voluntary community organization
 3. Contractualism entailed the establishment of competition between service providers.
- [NPM](#) has given potential scope for less linear approaches
 - top-down to bottom-up consultative mechanism in formulation
 - There are purpose setting and decision making process other than *rational goal-directed model*.

Strategies for Dealing with Wicked Problems

- More research, More science are not sufficient response.
 - They make Evidence-informed policy making, which is valuable.
- **Broader ways of thinking about variables, options, and linkages**
- **New models of leadership that better appreciate the distributed nature of information, interests, and power**

Broader ways of thinking about the Variables, Options, and Linkage

- [Holistic approaches](#) (거시적 접근)
 1. Frame reflection (Schon and Rein, 1994)
 - [Intractable disputes](#): different frames and value perspectives rather than in disagreements about scientifically verified knowledge
 - [Metaframe](#) builds frame of reference deployed on key actors
 - The role of researchers and policy analysts: delineating the factors shaping a complex situation, mapping the complex patterns of causality at work, and calibrating the likely effects of new interventions or programs.
 2. [Systems thinking](#)
 - Social knowledges are provisional and context dependent.
 3. [Complexity theory](#)
 - How **adaptive management** is required to respond flexibly to the changing social and institutional contexts and challenges.
 - How policy networks can positively respond to rapidly changing circumstances.

Collaboraton and Coordination

1. nature of the problem, and its underlying causes can be better,
2. Collaboration can found provisional solutions to the problem can be found and agreed upon, not only because a wider networks offers more insights but also because greater cooperation improves the prospect that diverse parties may reach an understanding about what to do.
3. Implementation of solutions: parties agreed on the next step, potentially enables shared contributions, coordinated actions, and mutual adjustments among them as problems arise in putting the agreed solution into practice. (상호 조정, 자율성 부여, 기관 대표의 유연성)

Knowledge collection

- Collaborative network for decision makers may bring complementary knowledges.
 - *Expert knowledge*: Cooperative knowledge, based on different professionals
 - *Situational Knowledge*: Knowledge based on social or institutional location
- How to Collaborate parties
 1. **Communication** as a collective endeavor to search 'win-win' solutions
 2. **Trust and mutual commitment** among the parties (Bardach, 1998)
 - Trust is very difficult to establish and build, expecially for public sectors.
 - **To build trust**: Demonstrate reciprocity and to avoid renegeing on undertaking.

New Leadership Roles

Role of Leaderships

1. [Transformational Leadership](#)
 - Leader has two roles: 1) To frame a vision, 2) To pursue that vision/direction/strategy by inspiring, enabling, and empowering them to do so.
 - Shortcomes: Leader should be capable of diagnosing problems and devising solutions to them.
--> Only for type 1 problems.
2. [Adaptive Leadership](#)
 - Public managers 'mobilize of adaptive work'.
 - Lead organizational members and/or stakeholders in undertaking themselves the collective work of grappling with the problem.
 - those who are led are asked to perform the shared leadership role of setting a direction.
 - Leader's role is not only to challenge people to do work, but also to provide the right circumstances, by holding environment.
 - Pros
 - Deals with diversity by involving multiple parties with their knowledge
 - Enable the surfacing of contending values and interests*
 - Dialogue between those in whom they reside.
 - > Inclusive management
3. [Collaborative leadership](#) Leading in a shared-power world
 - Encompasses a range of perspectives united in their recognition of the interaction between collaboration and leadership.*
 - Collaboration as a leadership, and leadership as a necessary impetus for collaboration.
 - Lead without hierarchy or managerial command.*
 - Cons: Lack of powers to remunerate, hire & fire

Collaborative leadership 조직과 Hierarchy가 뚜렷한 조직이 함께 일할 때 다양한 불협화음이 발생할 수 있을 것 같음. 최근에는 Collaborative한 조직으로 많이 변화하는 추세로 보이는데, 리더십 형태가 변화하던 초기 단계에는 어떤 갈등이 있었는지 궁금합니다.

Enabling Structures and Process

1. Establish and adapt *if the organizational structure is flexible*.
2. More flexible *budgeting and financial systems*
3. More sophisticated or nuanced approach to *performance measurement and program evaluation*
4. Development in *Human resource management*; recruitment, promotion, and skill development

