

The Politics and Institutions of Project Approval - a Critical-Constructive Comment on the Theory of Strategic Misrepresentation

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This article addresses theoretical and methodological explanations of miscalculations of costs and benefits in large infrastructure projects. In particular the focus is on the most influential theoretical contribution in this area, labeled 'the theory of strategic misrepresentation', a theory strongly associated with the work of Bent Flyvbjerg. The theory's major explanation of cost overruns is that the registration and representation of data and the calculations of costs and benefits are made by planners in organisations that have economic interests in the results. They work in a context where they compete for scarce public resources, and in which lying pays off in the end. The result is, as Flyvbjerg expresses it, the 'survival of the unfittest'. It is not the best projects that are built, but the most misrepresented ones.

This theory, with its focus on the institutional context and incentive structures, represents a major step forward compared to the solely methodological explanations. However, it has several shortcomings both in theoretical and methodological terms. Methodologically, the research has not the design necessary for validating the conclusion of 'the survival of the unfittest'. Theoretically, the framework does not offer any variation on the institutional variable nor when it comes to variation in planners (actors) motives and rationality. Hence, there is a need for a broader theoretical framework. We conclude our article by sketching such a framework, an institutional approach grounded in sociological theory, as well as applying it to Norwegian transport planning. The Norwegian research in this area does not support the thesis that project approval is a result of planners' strategic actions. More often it is an outcome of institutions where politicians play a key role at all levels and stages of the planning process, often neglecting planners' analyses and recommendations.

Keywords: Infrastructure planning; Cost benefit analysis; (strategic) misrepresentation; Professions; Institutional theory

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1. Introduction³

Large infrastructure projects are, as several international studies show (e.g. Wachs 1990, Flyvbjerg et al. 2003, Flyvbjerg 2007a), often miscalculated. The same has been shown in a country like Norway (e.g. Odeck 2004, Strand 2004, Osland et al 2007), which has a long tradition for transport planning. It is also a country where macro economics has a key role in the planning system. Wrong estimates often imply underestimations of costs in planning and building infrastructure, whereas the positive effects on transport demand are often underestimated in cases of road infrastructure, but more often overestimated in the case of rail infrastructure (Flyvbjerg op.cit.).

The sources of error and bias are many (Mackie and Preston 1998). We shall here broadly distinguish between two influential perspectives on how to evaluate miscalculations of costs and revenues in large infrastructure projects. *The methodological approach* emphasizes methodological explanations and improvement of the methodology, e.g. by using *ex post* cost benefit analyses in order to provide feedback to models as well as to handbooks for public administration doing *ex ante* cost benefit analyses. In doing so, it aims at systematically evaluating to what extent discrepancies between *ex post* and *ex ante* results are due to 1) different methods, 2) independent factors external to the project (e.g. higher economic growth rate than expected) and 3) project dependent discrepancies (Eriksen and Minken 2004 a and b, Osland et al 2007).

The strength of this approach is that it systematically aims at reducing methodological faults, as well as institutionalizing learning for planners and policy-makers, by means of a design that systematically tries to cope with the question of counterfactual development. On the other hand, there may be reasons for questioning the assumption that the conditions for such learning are met, e.g. if planners have incentives for deliberately presenting miscalculations.

The second approach to evaluation of large-scale infrastructure projects, what we call *the theory of strategic misrepresentation*, focuses on how strategic misrepresentation may lead to wrong estimations of costs and benefits. This approach, developed by Flyvbjerg and his colleagues, is based on the assumption that there are not only methodological explanations but also political-economical explanations of miscalculations and cost-overruns. The registration and representation of data and the calculations of costs and benefits are made by planners in organisations that have economic or other substantial interests in the projects, in a context where they compete for scarce public resources, and in which lying in the end pays off.

This perspective sheds light on the problem of miscalculations and other important factors that may influence the miscalculations besides the methodological ones. However, this approach also has important weaknesses, as this article will show. Our article takes as its point of departure insights from the perspective of strategic misrepresentation, while it also tries to overcome some of its shortcomings.

In the first part of the paper we will describe and criticize the theory and methodology of the perspective on decision-making as strategic misrepresentations. In the second part we will suggest how this approach may be developed analytically, both theoretically informed by institutional theory and based on the plausible alternatives that Flyvbjerg (2007) has promoted in terms of institutional improvement. We conclude our article with an illustration of this approach

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as well as providing a test of the thesis of strategic misrepresentation on the case of Norwegian transport planning.

2. The political-economic approach: Miscalculations as results of strategic actions

In the following, the focus is on the approach and findings from a group that has carried out extensive empirical research in this area, Bent Flyvbjerg and fellow researchers in Aalborg. They find two empirical patterns which support that there is a decisive non-methodological variable affecting miscalculations: The fact that such miscalculations systematically gives underestimation of cost, and secondly, that estimates have not improved over time.

We shall describe and discuss their explanations based on Flyvbjerg (2007). He distinguishes between three main types of explanations of miscalculations:

Technical explanations refer to methodological problems such as lack of data or inappropriate data, inadequate models or professionals' personal failures.

Psychological explanations refer to situations in which planners base their judgements on optimism rather than rational calculations of costs, benefits and probabilities (planning fallacy, optimism bias). They promote initiatives that cannot be solved within the budget.

Political-economical explanations are based on the assumption that planners and other actors who promote projects deliberately and strategically overestimate benefits and underestimate costs when predicting project outcomes. They do so in order to increase the probability of the realisation of "their own" projects. This is a result of an incentive structure in which lying pays off.

Flyvbjerg argues that the political-economical explanations have the greatest explanatory power. His argument is that if technical explanations are correct, wrong predictions should be more equally distributed, both leading to over- and underestimations. He also argues that if the technical explanations are correct, improvements in learning processes should occur over time. The psychological explanations are more adequate in this view. They predict an underestimation of costs and overestimation of benefits, which is in accordance with his findings. However, as this interpretation has little support in the interviews with planners, it is, according to Flyvbjerg, weakened. He also points out that learning should lead to, if not elimination of, then at the least reduction of optimism bias. It is (therefore) the political-economical explanations that fit best, according to Flyvbjerg. To summarize, Flyvbjerg's argument is twofold: firstly, it is based on this elimination of the other explanations and, secondly, Flyvbjerg also refers to interview data supporting this interpretation.

There are some weaknesses in Flyvbjerg's argument. It is possible to distinguish between two (interrelated) types of weaknesses: the ones that are primarily analytical and the ones that are more clearly methodological and related to the interpretation of the empirical data. Our discussion begins with the latter.

Our methodological critique questions whether Flyvbjerg has made use of the methods and gathered the empirical data that give him reason to rule out the technical explanations in favour of the political-economical one. We will elaborate this critique by using his thesis about 'the survival of the unfittest' as point of departure: Flyvbjerg recognizes that prediction of costs and benefits is a difficult activity. He points out that megaprojects are characterized by risks because of long planning horizon and complex environment; decision-making, politics and planning mostly involve many actors and processes with conflicting interests; goals and ambitions with projects may change significantly over time; unplanned events are seldom calculated in the

projects. However, this notorious uncertainty with megaprojects as well as methodological challenges in handling them, have, according to Flyvbjerg, little explanatory power. "Misrepresentation" is the major explanation according to him. Flyvbjerg's notion of the survival of the unfittest – "*often it is not the best projects that are built, but the most misrepresented ones*" – leads to his construction of the following formula:

$$\begin{aligned} & \text{Underestimated costs} \\ & + \text{Overestimated benefits} \\ & = \text{Project approval} \end{aligned}$$

"Using this formula, and thus "showing the project at its best" as one interviewee said above, results in an inverted Darwinism, i.e., the "survival of the unfittest". It is not the best projects that get implemented, but the projects that look best on paper. And the projects that look best on paper are the projects with the largest cost underestimates and benefit overestimates, other things being equal. But these are the worst, or "unfittest", projects in the sense that they are the very projects that will encounter most problems during construction and operations in terms of the largest cost overruns, benefit shortfalls, and risks of nonviability. The projects have been designed like that" (Flyvbjerg 2007 b, p. 25)

The paragraph above includes several claims that Flyvbjerg does not have the necessary empirical data to verify. Firstly, he claims that it is not the best projects that are implemented, but the project that looks best on paper. Yet he has no data on alternative projects that was ruled out in the decision-making process. Secondly, he claims that the projects that look best on paper are those with the largest cost underestimates and benefit overestimates, other things being equal. We are not sure what 'other things being equal' means here, but it seems to be at odds with an argument Flyvbjerg has put forward elsewhere (Flyvbjerg 2007b, p. 582): costs and benefit estimates are not wrong by the same margin across projects, errors vary extensively and will affect the ranking of the projects. We do agree with the latter argument. However, this implies that to decide what project 'looks best on paper' has to be based on comparisons with the miscalculations in projects that were given lower priority. Again, Flyvbjerg has not made such analyses. Lastly, due to the same argument, we cannot see that he has any empirical support for his claim that the chosen projects are the ones that will encounter most problems during construction and operations.

In other words, if the survival of the unfittest should be seen as a conclusion, data is needed both on the projects that won, the ones that lost, and the possibility of comparing them in terms of reference scenario for the latter. This has not been done in Flyvbjerg's research. Therefore, the following conclusion also seems premature:

One may add that many projects don't proceed that probably should, had they not lost out to projects with "better" misrepresentation (Flyvbjerg, Holm and Buhl 2002).

Moreover, Flyvbjerg too quickly rejects the technological explanations on the basis that if these explanations are correct, wrong predictions should be more equally distributed, both leading to over- and underestimations. As Flyvbjerg himself points out, it is particularly rail forecasts that are inaccurate and biased (Flyvbjerg et al 2003:27, Flyvbjerg 2007 c), implying both underestimations of costs and overestimation of benefits. Road projects, on the other hand, often have higher benefits than estimated.

To summarize, we do not find that Flyvbjerg's quantitative data and research design supports his general conclusion that the technical and psychological explanations can be ruled out. However, Flyvbjerg has argued that he has empirical evidence from interviews that planners admit that they lie and misrepresent. This, he argues, is another reason for rejecting the psychological explanations. However, we cannot see how *examples* of actors admitting such misrepresentation should be sufficient support for the thesis that misrepresentation is the *major* explanation.

Indeed, we argue that Flyvbjerg's interpretation is a variant of 'the hermeneutics of suspicion'. This notion was developed by Ricoeur (1975) in order to conceptualise a distinct theoretical mistake common for such scholars as Marx, Nietzsche and Freud, whose positions were that they could reveal (illegitimate) interest behind peoples actions. Of relevance in our context is that this understanding of human agency has certain important similarities with Williamsons concept of opportunism, "Opportunism is a variety of self-interest seeking but extend simple self-interest seeking to include self-interest seeking with guile" (1986:125). For Flyvbjerg and other proponents for the hermeneutics of suspicion, the actors actually admitting telling lies can be seen as the "tip of the iceberg". However, it is also a perspective that would not be falsified if no examples of actors admitting lying were found. On the contrary, it could easily be interpreted as a verification that they were lying also for the researchers.

This methodological problem leads us to our critique of Flyvbjerg's analytical framework: Although Flyvbjerg's assumptions about actors motives and rationality are rather implicit, it seems that he sees planners as actors that are not only self-interest seeking in the sense that they act in order to maximize resources to "their" project; they are also opportunistic in Williamsons sense of the word. But contrary to Williamson, Flyvbjerg does not seem to see opportunism as a variable. He does not seem to provide an analytical opening for different types of rationality. This is also the case when it comes to institutional variation. The political-economic model comprises both a certain type of actor as well as a certain type of institutional environment (an incentive structure promoting the survival of the unfittest). Hence, in a certain sense, in Flyvbjerg's analytical framework we do not find any variation neither on the institutional nor the actor variable: Flyvbjerg assumes that "all actors are equal" (all actors are opportunistic, rather than for instance acting in accordance with scientific norms), and all institutional incentive structures promote lies. However, "some actors are more equal than others" and they are winners of the games of strategic misrepresentation.

Despite these weaknesses in the analytical framework, Flyvbjerg (2007) has proposed major and probably also significant changes in incentive structures: such as increased transparency, local co-financing and lump-sum rather than ear-marked financing. Flyvbjerg also proposes improvements in methods; Reference Class Forecasting, i.e. to place the project in a statistical distribution from a class of similar projects. The internal project forecast may be compared with an "outside view" based on information from similar forecasts.

Our argument is twofold. Firstly, these *suggestions* seem to go beyond the analytical framework used by Flyvbjerg in his *research* on the subject. Secondly, these suggestions, at least the ones referring to improved incentives, point to variation that already is likely to exist, e.g. between countries or as a result of institutional changes in a given country. Hence, such variation should be included in the analyses. We therefore need an analytical and methodological approach that makes it possible to analyze the relative importance of variation in planners' motives and in the institutional context (such as incentive structure).

3. The institutional approach - sketch of an analytical framework

There are two types of research questions addressed in the research described above: one type of research question is that of explaining miscalculations and promoting institutional design that leads to a reduction of such miscalculations. Methodologically this research faces the same challenges as in *ex post* cost benefit analyses, e.g. that the data and the methods used in *ex ante* analyses seldom are so well documented that the estimates can be replicated (Eriksen and Minken 2004 a and b). It also has to cope with the question of how to estimate different types of discrepancies between *ex ante* and *ex post* results: methodological, project dependent and project

independent discrepancies. This implies that there is much to be gained by a further integration of the methodological and what we here shall call the institutional approach.

Another type of question is the thesis of “the survival of the unfittest”, i.e. that it is the projects that are misrepresented the most that are approved. If that is the case, why have they been approved? Does conscious manipulation by planners have an important place in the decision making process? As pointed out above, the research design for answering these questions should preferably include projects that won and lost, and a systematic comparison of these in terms of degree of misrepresentation. The second-best design, and in some cases sufficient to falsify the thesis of the survival of the unfittest, is to compare what projects look best on the paper (e.g. in terms of the ex ante cost-benefit ratio). This research area, which may be labeled “the politics and institutions of project approval”, should include how other premises than cost benefit analyses (e.g. equity concerns) and other actors than planners may be of importance in the decision-making processes.

We will concentrate on ‘the politics and institutions of project approval’, and elaborate the institutional approach, combined with a methodology including comparison between the projects that won and the ones that lost.

There are several branches of institutional theory, anchored in either economics such as transaction cost theory (Williamson 1986) or principal agent theory, in political science and organisational theory (e.g. March and Olsen 1989 and Scott 1995). In the following we shall take as point of departure a sociological institutionalism, anchored in Weber’s notion of bureaucracy and the sociology of professions.

A discussion of the pros and cons of different types of institutional theory is beyond the scope of this article. However, a key argument for bureaucracy as an organisational form as well as a sociological concept is that it assumes economically disinterested actors (Miller and Hammond 1994), i.e. actors having other motives than income maximization, in particular a career in the organisational hierarchy. The separation of politics and administration and the establishment of an autonomous, professional bureaucracy credibly constrains political officials from rent-seeking behaviour (Miller 2000: 319).

To outline an institutional approach anchored in the Weberian tradition, implies to establish an analytical framework that is multidimensional, i.e. it operates with variation both in terms of institutional context (e.g. whether planners have autonomy or not) and the rationality and motives of key actors such as planners and politicians (e.g. whether planners are opportunistic or motivated by professional standards). In the following we will briefly outline such a framework.

We propose to see the transport policy sector as a *political field* in a Bourdieu-inspired way (Bourdieu 1991), as an arena in which actors compete to influence political decisions such as on infrastructure investments. These actors have different roles in the different *stages in the decision making process*; the initial agenda setting stage where a problem (or a project!) is recognized and defined; the next stage when possible policy alternatives are identified and the options are evaluated, the stage when political decisions are made, the implementation stage and – in some cases – the stage when the project is evaluated. Manipulation by planners can be found in all stages, as Sager says (1999).

By *actors* we refer to an acting unit, i.e. which may be an individual or an organisation. By *organisation*, we refer to a social unit deliberately established in order to pursue certain goals (Etzioni 1964). Organizations are of different types, they have different types of goals, norms and values that influence the strategic actions they pursue. The goals that organisations pursue are shaped by the institutional surroundings within which they act. By *institutions*, we refer to patterns of human activity and symbolic systems, cognitive constructions and normative rules through which actors categorise that activity and infuse it with value (Friedland and Alford

1991). Such institutions may be related to certain institutional spheres such as the legal institutions and economic institutions. These institutional spheres have certain logics or dynamics, which influence the organisations' strategies: it is likely to be differences in planners' strategies if they are in private profit making organisations or in public organisations.

Professionals are a certain type of actors. A *profession* may be defined as an occupational group applying abstract knowledge to certain problems with (successful) jurisdictional claims on certain areas (Abbott 1988) – in our case certain areas of public policy. Professions are characterised by academic training that has resulted in a distinct, specialised body of knowledge, they have monopoly on certain positions in public and private organisations, *an esprit de corps*, and a common ethical code.

Professions have a somewhat “esoteric” knowledge. The basis of their monopoly of certain knowledge is that they are trained in theories, methods and techniques that others do not easily possess. Hence two types of transparency of planning models may be distinguished: 1) the degree of transparency in the professional area, e.g. whether data and methods are transparent and under the scrutiny of peers, and 2) whether it is transparent and liable for critique from outside the professional area, e.g. from media and politicians.

In many cases disputes over public policies are interdisciplinary disputes, stemming from different professions claiming (superior) knowledge on the same subject or problems. The institutional characteristics of the political field, i.e. the economic structure, the laws and regulations, the division of responsibility and procedural demands for the decision making processes, influence the distribution of power and authority between actors and organisations, by defining ‘the rules of the game’. *Power* is here understood as multidimensional (Lukes, 1974, Clegg, 1989), comprising the Weberian sense of power as the ‘probability that an actor within a social relationship will be able to carry out his will despite resistance’ (Weber 1947), yet acknowledging that this also implies the power of non-decision making (Bachrach and Baratz 1963), not the least by the ‘mobilisation of bias’ (Schnattscheider 1960): meaning that the organisation and institutional constraints in the political process imply that some actors, issues and values are organised into politics and others are organized out. It also includes symbolic power (see e.g. Bourdieu, 1991), the power based on control over concepts and categories that produces legitimate perceptions of a problem (e.g. cost-benefit analysis)

The power of actors or organisations is not merely a result of the rules of the game, but also the resources (economic, cognitive etc) they are able to mobilise. Many actors involved in decision-making processes are part of or strongly associated with a profession.

This analytical framework, roughly sketched in this article, implies that the analyses of miscalculations of large infrastructure investments should be based on a comparison of political fields with different characteristics and the effects of decision making processes in these fields in terms of policy outcomes, i.e. what projects are approved. Key elements in the political field are: institutional structure in terms of economic institutions (e.g. how infrastructure projects are financed), laws and regulations as well as procedures (including degree of transparency); the types of actors (such as organisations and professions) that are included or excluded from the policy process and the goals and strategies they pursue. This framework may be used for several types of analyses: intra-sectoral comparisons (how the structure of for instance a country's road planning system has changed over time and its effect on miscalculations or project approval), cross-sectoral comparison as well as cross national comparison.

4. Application of the framework on Norwegian road policy – a preliminary test of the thesis of strategic misrepresentation

If we apply this framework to Norwegian road transport planning, three types of actors seem to have a dominant position in the political field of transport planning: politicians and the two professions engineers and economists. Whereas politicians and engineers have key positions at all levels in public administration, economists do primarily hold key positions at the central level. Politicians have a key position in initiating projects at the local level, traditionally often in close cooperation with the regional road administration, dominated by engineers. The policy process is not characterised by a clear cut division between politics and planning in different stages, but rather by a complex interplay between politics and planning at different levels, making it difficult to analyse the role of different types of actors.

Although the thesis of strategic misrepresentation has never been tested on Norwegian data, several studies of the influence of planners and politicians in Norwegian transport planning is of relevance for such a test. For instance, a recent *ex post* evaluation shows that five of eight projects have an estimation of costs higher than real costs (Odeck and Kjerkreit 2008), which is a finding contrary to the thesis of strategic misrepresentation. Moreover, the benefits were higher than *ex ante* estimates in seven of eight projects. This is in accordance with Flyvbjerg's findings, but contrary to his interpretations.

Our main critique of Flyvbjerg's research is that it is necessary to know the calculations of costs and benefits of the alternatives that are ruled out, in order to test the thesis. In Norway, as in many other countries, planning of e.g. new roads implies that planners are obliged to develop alternatives, for comparison of costs and benefits, both in monetary and more qualitative terms. It should therefore be possible to carry out studies that includes *ex ante* calculations of the alternatives that were ruled out, in addition to the decided projects reported on by Odeck and Kjerkreit (2008).

Earlier Norwegian studies of the decision making process and its outcomes do not indicate that projects are ranked or prioritized in accordance with the cost-benefit ratio. In a study of preferences behind road investment priorities (Fridstrøm and Elvik 1997), the conclusion is that costs and benefits are only of marginal importance for the priorities set. More weight was given to costs than benefits, and smaller projects were preferred to larger, given the cost-benefit ratio.

In a study of a road project in Kristiansand, Hagen et al. (2005) show how the administrative planning unit clearly recommended a low cost alternative, whereas the city council supported a more expensive alternative, first and foremost because of the benefits for the local urban environment of this alternative. When national authorities were asked to decide in the controversy, they decided in favour of the local politicians. This decision can't be seen in favour of "the survival of the unfittest".

Earlier studies of the effects of impact assessments give different, but probably complementary indications about the relation between politicians and planners in Norway. In a study of impact assessment of roads from the early 90s, Strand (1994) found that the administrations' recommendations were not in accordance with the impact assessments' recommendations in two of eight cases. The regional road administration also changed its recommendation after hearing in five of eight cases. Moreover, in one of the three cases where the regional road administration did not change its recommendations, their decision was overruled by the road administration at central level. On the other hand, the study Sager (1995) did on impact assessment of transport plans in ten major Norwegian cities shows that impact assessment in many cases are politicised, i.e. they aimed at taking into accounts all the effects that elected politicians had signalled interest in. The study showed that in many cases the impact of a given strategy was only formulated implicit, and in many cases there was only a loose connection between impact assessment and

recommendations. He concluded that the planners' analyses and recommendations in many cases do not enhance rationality in political decision making (Sager 1995). These studies also illuminates how different structures leads to different relations between planners and politicians. Sagers study shows a planning process where planners recommendations are adapted to and shaped by political signals, the planners are restricted by the political rationality, whereas Strands study shows several examples of more autonomous planners at the local level, yet also in these cases political considerations overruled planners recommendations at the end of the day.

Also at the national level there has been low emphasis on the results of cost benefit analyses. Studies of the Norwegian national parliament's Standing Committee on Transport and Communications show that politicians give relatively little weight on cost benefit analyses (Nyborg and Spangen 1996, Ravlum and Hedegaard Sørensen 2005), whereas other premises such as local interests and local political sponsors are likely to be of importance. This has been an institutionalised pattern in Norwegian transport policy for decades, and leads to priorities of investments in rural areas over urban areas (Boge 2006, Helland and Sørensen 2009), and to priority of road investments over environmental interests in urban areas (Bekken and Osland 2004). Sager and Ravlum (2005) discuss why politicians find it hard to concentrate on the strategic level in decision-making, one reason being that their home county constituencies are more interested in certain projects than in more general strategies.

These findings and interpretations also imply that the third important actor in road planning, the economists who have a key position in the Ministry of Transport and Communications, and the criteria they prefer, cost benefit analysis, does not lay the premises for Norwegian road transport policy. It may change, as some years ago a new planning order was established for public infrastructure projects of certain dimensions (www.concept.ntnu.no) strengthening the economic assessment of big projects in an early phase of the project.

To summarize, research in Norway does not support the thesis that misrepresentation 'pays off'. Of importance are other criteria, in particular a notion of 'fair' distribution of road investments between regions, combined with strategic use of projects that maximize votes in the political game. Our general conclusion does not imply that there are no indications of strategic use of information from planners. On the contrary, discussions following reports from the Office of the Auditor General of Norway (Riksrevisjonen) on cost overruns, both in parliamentary hearings and among some researchers have pointed to misrepresentation as a problem (Strand 2004). (This was also one of the arguments for making a clearer division between planning and building competencies in the Norwegian Public Road Administration from 2003). However, there is not general conclusive evidence to support the formula *underestimated costs + overestimated benefits = project approval*. In fact, many findings indicate the contrary, and this should be followed up by further studies in the years to come.

Our interpretation is that these findings may be seen as results of the specific institutions that Norwegian road planning is embedded in, a relatively politicised environment at all levels and stages of policy-making. It illustrates that 'the politics and institutions of project approval' should be addressed in an analytical framework that is broad enough to cover different types of actors and rationalities as well as different institutional surroundings. The Norwegian studies reveals that planners act in planning processes with various degrees of autonomy and various incentives, leading to different situations as to whether it is rational to act in accordance with the professional code of conduct or not. Several of the studies also show the significance of a methodology that includes comparison of the projects that won - and the ones that lost - in the ex ante situation.

5. Conclusion

In this article we have presented a critique of the theory of strategic misrepresentation. Methodologically it has not the necessary research design to test the thesis of the survival of the unfittest and it cannot test whether actors are opportunistic or not. The analytical framework does not provide a theoretical understanding that gives the researchers a possibility to discover the methodological faults: it is one-dimensional both when it comes to actors' motives and incentive structures.

We therefore propose an alternative analytical and methodological approach. This alternative analytical approach is anchored in sociological theory, assuming that actors (*in casu* planners) have different types of rationality. Some may be opportunistic, others may have positions in a bureaucracy which gives them a combination of autonomy and lack of self-interest in the outcome of political processes, and therefore also the ability to act in accordance with norms rooted in a professional ethos. Hence, there is likely to be variation both when it comes to the institutional variable and actors' motives and rationalities.

We have illustrated this approach by presenting research and some preliminary observations from Norwegian transport planning. It has a structure where planning traditionally has been embedded in politics at all levels. In some cases this has led to misrepresentation in the sense that planners' recommendations are ruled out and disguised in politicised documents. In many other cases it is not the projects recommended by planners or with the best cost-benefit ratio that wins, but the projects with the strongest political support. Many of the last decade's reforms addressing organisations of and procedures in Norwegian transport planning have been put forward in order to increase planners' autonomy, and to reveal the criteria and effects of political decisions.

Our analysis does not provide general support to the thesis of the survival of the unfittest nor the theory of misrepresentation. Although research on Norwegian transport planning and infrastructure investments indicates that this theory is supported in some cases, it is falsified in other cases. And it is exactly this variation that should be at the forefront of the analyses of miscalculations of costs and benefits in large infrastructure projects.

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