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Debunking fake news in a post-truth era: The plausible untruths of cost underestimation in transport infrastructure projects

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ABSTRACT

The methodology, analysis, and the unfounded conclusions presented in the paper "Underestimating costs in public works projects: error or lie?" by Flyvbjerg, Holm, and Buhl (2002), published in the Journal of the American Planning Association are critically questioned. Flyvbjerg, Holm, and Buhl attribute the cause of cost underestimation in transport infrastructure projects to delusion (optimism bias) and deception (strategic misrepresentation). The bifurcation of the cost underestimation problem into error or lie presents a false dichotomy – an either/or choice that is invalid when juxtaposed with the real-world nature of procuring large infrastructure assets. Put simply, the conclusions presented by Flyvbjerg, Holm, and Buhl are akin to being fake news. Unfortunately, the persistent reverberation of these convenient narratives and factoids in both academia and media has led to these explanations becoming an accepted norm. In this paper, the claims made by Flyvbjerg, Holm, and Buhl are debunked. A call is made for policy-makers to embrace and utilize evidence-based research so that informed decisions about capital cost estimates and potential risks can be better ascertained at the front-end of major transport infrastructure projects.

1. Introduction

> We [journalists] don't report the news, we make it. Accuracy is so time-consuming. Fiction is the new fact – Roger, *American Dad!* (s10e19: "News Glance with Genevieve Vavance")

The manipulation of the truth for political gain is something that the general public has become all too accustomed to when the capital costs of transport infrastructure projects are examined. Propaganda regarding project costs has formed the cornerstone of the political landscape, as incumbent governments, opposition parties, journalists, and even academics leveraging the branding of their institution to engage in campaigns of misinformation to play out their agendas. With the dawning of the post-truth era, a new world of *epistemological nihilism*[1] appears to have come to the fore. This has been driven by cherry-picking data by those protagonists who attribute the cost underestimation of transport infrastructure projects to delusion and deception (e.g., Flyvbjerg et al., 2002; Flyvbjerg et al., 2007; Flyvbjerg, 2008; Flyvbjerg, 2009). The corollary is that such emergent explanations have become just as valid as others that actually reflect the truth (i.e. in accordance with reality and fact). The rhetoric that is used to repeatedly and deliberately promote and reinforce the misinformation that has been established by those who advocate delusion and deception *via* academic

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[1] Nihilism, often associated with Friedrich Nietzsche (1844–1900) is the belief that all values are baseless and that nothing can be known or communicated (Brobjer, 2008).

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outlets, public and social media, is akin to being fake news. This has resulted in previously well-established work based upon a scientific underpinning being delegitimized and cast as being of the same ilk.

The perpetual inability of the public sector to address the cost underestimation phenomena that plagues transport infrastructure projects (e.g., Terrill and Danks, 2016) has resulted in many agencies becoming disillusioned with explanations of their causal rationality. Instead, they have been replaced by those of a sensationalist nature. For example, Flyvbjerg (2013a,b), has used statements such as "a majority of forecasters are fools or liars" to explain inaccurate cost estimates (p.772). Such an attention-seeking statement, intentionally crafted to be provocative and controversial, has no scientific merit and has been simply contrived to gain attention. Moreover, declarations of this nature demonstrate sheer ignorance and disregard for the complexities and nuances of the design and estimating process of transport infrastructure projects. It is, however, surprising how many media outlets that have been drawn to this falsehood and given it credence without actually examining the facts and educating themselves about the processes involved in estimating the capital costs of transport projects.

Supporters of the delusion and deception explanations have been just as crafty as Machiavelli (1515), as they have feigned and dissembled information to promote their own line of inquiry. Indeed, they are master storytellers, who have been and continue to use convenient narratives to win over many government authorities who are rightly searching for a silver bullet that will ensure their transport projects are delivered successfully according to pre-determined deliverables. Unfortunately, it would appear policy-makers and the media have accepted, at face value, the delusion and deception explanations of cost underestimation causation, despite the lack of empirical evidence to support these conclusions. The danger associated with accepting the delusion and deception explanation results in disincentives to improve or optimize project practices. A solution is, therefore, inflated estimates or even to punish those that are deemed to be too low referring them to as being criminal acts. Then, this creates the incentive to overestimate.

As will be put forward in this paper, the misinformation that has been and continues to be used to argue these perspectives are debunked and a call is made for a focus on evidence rather than rhetoric and opinions in future discourse regarding cost underestimation causation. If policy-makers are to make headway in ensuring that their projects are delivered cost-effectively and continually improve in performance, then it is necessary they stop listening to the rhetorical spin that has been frequently promulgated by Flyvbjerg et al. (2002) and instead rely on facts that can be used to make informed decisions about capital cost estimates and potential risks.

2. Debunking the rhetoric

The literature is replete with studies that have examined the magnitude, causes and consequences of transport infrastructure project cost underestimation, also more commonly referred to as overruns (e.g. Merewitz, 1973; Sebastian, 1990; Thurgood et al., 1990; Hinze et al., 1992; Bordat et al., 2004; Odeck, 2004; Shane et al., 2009a,b; Terrill and Danks, 2016; Love et al., 2017a). While there is widespread consensus that cost overruns are a pervasive problem, their causes remain matters of contention (Love et al., 2015a,b). This has been, in part, due to the limited access to cost information that is used to produce estimates and the availability of reliable data that can be used to prove causes (Siemiatycki, 2009: p.143).

In science, the primary criterion and standard of evaluation is the provision of evidence, not proof. Notably, a proof exists only in mathematics and logic, which are both closed self-contained systems of propositions. Science is fundamentally empirical in nature and therefore the created knowledge is tentative and provisional. An accepted theory of cost overrun causation, for example, would merely provide the most fitting explanation among all alternatives that are made available. The status of an accepted theory would, inexorably, be subject to change, if there appeared to be a better one or new evidence that could challenge its ability to provide a better explanation of cost overrun causation.

At this juncture, it needs to be pointed out that there is no universally accepted theory that is able to explain cost overrun causation (Love et al., 2016). This is largely due to the contextual embeddedness and systemicity that prevails with this problem (Ahiaga-Dagbui et al., 2017). Two schools of thought, however, have emerged and their respective positions provide a platform for understanding and examining this phenomenon (Ahiaga-Dagbui and Smith, 2014a,b). These schools are the: (1) Evolutionists who suggest that overruns are the result of changes in scope and definition between the inception stage and eventual project completion; (2) Psycho-strategists who attribute overruns to deception, planning fallacy and unjustifiable optimism in the setting of initial cost targets. A detailed discussion of these two schools of thought can be found in Ahiaga-Dagbui and Smith (2014a,b) and Love et al. (2016).

While considerable inroads have been made by the evolutionists to explain cost overrun causation, (e.g., Jahren and Ashe, 1991; Bordat et al., 2004; Ellis et al., 2007; Odeykina et al., 2012), the mitigation and containment strategies that have been developed to combat this phenomenon have fallen short of their intended goal. This point has been made by Altshuler and Luberoff (2003) who stated:

> "It is striking that this long-standing pattern [of cost overruns], which appears to prevail worldwide, continues unabated despite major improvements in technical capacity for cost estimation – suggesting that its causes lie primarily in the realm of politics rather those of engineering or accounting" (p.221).

Naturally, this had left the door open to present alternative explanations. Taking advantage of this opening, several have suggested that psychological (i.e. optimism bias) and political-economic explanations and strategic misrepresentation provide an adequate justification for the systematic underestimation of project costs in transport projects (e.g., Flyvbjerg et al., 2002; Altshuler and Luberoff, 2003; Flyvbjerg, 2007; Canteralli et al., 2012a,b,c).

No empirical evidence, however, has demonstrated that these explanations directly contribute to cost underestimations in