The sunk cost fallacy and throwing the baby out with the bathwater: a little like rocket science

As accountants, we know a lot about decision-making and evaluation. At least we like to think we do. We teach decision-making and evaluation. We research decision-making and evaluation. One important tenet of decision-making and evaluation (at least from an accounting perspective) is to disregard sunk costs, and to avoid the sunk cost fallacy. The sunk cost fallacy refers to the situation where someone continues a course of action on the basis of the costs already incurred, rather than assessing the merits of the case at the time (because "we can't give up now after all the money we have already poured in"). However, sometimes disregarding the sunk cost fallacy is a rational alternative (a bit like letting the cake stay in the oven because it is not cooked yet) if we recognize and appreciate that we often make decisions with an incomplete set of information. Put another way, what appears to be a rational decision grounded in avoiding the sunk cost fallacy may actually be a failure in capturing, recording and reporting appropriate cost/benefit information. This is particularly pertinent when pursuing a resource-intensive course of action that involves nonfinancial benefits. Such an example to learn from is the cancellation of the later Apollo space missions in the 1970s.

The cancellation of the Apollo missions is one instance of where adherence (by design or by default) to the sunk cost fallacy may have been warranted. We should explain. Following the success of the Apollo program, Director of the Marshall Space Flight Center, Wernher von Braun advocated a crewed mission might land on Mars as early as the 1980s (von Braun, 1969) – yet not only are we are still waiting to boldly go where no person has gone before – but humanity has not left low Earth orbit since the flight of Apollo 17 in December 1972. By not capitalizing on our momentum in the early 70s, we have missed out – economically, technologically, industrially (among others). There are many instances of space missions resulting in by-products, processes and innovations that benefit society as a whole, and usually in ways that would not be considered as space-related (e.g. WD-40, medical equipment, motivation for children to pursue STEM careers, galvanizing interest for teachers to improve educational outcomes, national unity, global unity, engineering marvels that permeate beyond space-related tasks, telecommunication advances in both quality and access, creation of new industries – to name a few).

The cancelation of Apollo 18, 19 and 20 was a political decision to reallocate resources based on a perceived waning of the national enthusiasm for space endeavors. The budget-heavy focus of such a decision gives credence to the cost side of the decision matrix. But what if the benefits had been more completely captured, recorded and reported for consideration? Would a proper accounting and conveyance of the benefits of the prior Apollo missions have helped to sway public opinion and politicians? This decision was not about just the cost to send more astronauts to the moon in order to receive only national praise in diminishing returns. Indeed, the budgetary impact from canceling the Apollo 18, 19 and 20 was a negligible $42m according to NASA, since all the equipment, software and hardware, and personnel were already in place for those missions. Even some of the insignias had been designed. Unfortunately, however, the "benefit" of reallocating these marginal uncommitted resources was the perception (Silber, 2009).

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What if information was presented to approach the missions as opportunities to generate scientific knowledge, diffuse innovation, create markets, unite rather than divide countries and arguably most importantly, to inspire people around the world (NASA, 2013). If we had better accounting of decision-relevant benefits, especially second-degree tangible and intangible benefits, then the decision to cancel may have been different.

Similar to space missions of past and present, many global projects exist that consume massive resources and involve a wide variety of public and private stakeholders. Examples include projects involving coronavirus disease (COVID) responses, telecommunication infrastructure, artificial intelligence, data analytics, advanced medical and surgical procedures, and genomics. Instead of decisions to "cut your losses" when questioning the cost-benefit of resource-intensive ventures, we suggest to instead be sure to not throw out the baby with the bathwater. This is a call to pay more attention to benefits – including potential benefits – when making complex decisions about initiating or continuing projects, and accounting itself would benefit society and its stakeholders by learning how to better capture and communicate decision-relevant benefits.

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