A review of
The Checklist Manifesto
by Atul Gawande
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Rating: 9
(The Official Ayers Rating Scale goes from 1-10. Discarding anything lower than 6 produces a net five-point scale from 6-10.)

Think *you* face a tough challenge? How about trying to reduce the rate of complications in major medical surgery? By the way, come up with a scheme that will work with highly-trained, highly-paid (and some might say, highly-arrogant) surgeons in an urban Boston Hospital. And also works in a barely-adequate clinic in rural Ghana. And does not require a state-of-the-art infrastructure or involve the use of high-tech equipment.

Atul Gawande is a surgeon who led the development of general checklist for surgeries for the World Health Organization – to be useful in rural Ghana and urban Boston. I approached this book with the question: Does the premise of *checklist* lend itself to practices such as leadership? Or innovation?

Gawande looked at a variety of research on the creation and use of checklists, to first get beyond the dismissive attitude of, "Yeah, well, that might work for *some* jobs but mine is too complicated, variable, dynamic, inconsistent …"

> "The first key came in identifying which kinds of situations checklists can help with and which ones they can't. … [Zimmerman and Glouberman have identified] three different kinds of problems in the world: the simple, the complicated, and the complex. *Simple* problems, they note, are ones like baking a cake from a mix. There is a recipe. … *Complicated* problems are ones like sending a rocket to the moon. They can sometimes be broken down into a series of simple problems. … *Complex* problems are ones like raising a child."

Leadership and innovation seem to fall into that second category, complicated.

Thinking about an example of a complicated problem, Gawande happened to walk by a construction site. How about building a skyscraper? It's pretty complicated and the people who do it routinely succeed. It turns out that builders depend on checklists. Interestingly enough, there are *two* critical checklists posted on the wall in the control center.

> "Pinned to the left-hand wall opposite the construction schedule was another butcher block-size sheet almost identical in form, except this one, O'Sullivan said, was called a 'submittal schedule.' It was also a checklist, but it didn't specify construction tasks; it specified *communications* tasks."

Putting up a skyscraper involves not only *doing* the work but also ensuring that everyone is on the same page (literally) in terms of *talking* about the status of the work. Thus, the effective use of checklists takes into account two apparently opposing notions. First, they ensure that stupid but critical stuff is not overlooked. Second, they ensure people talk

and coordinate and accept responsibility while simultaneously leaving people with the power to manage the inevitable nuances and unpredictabilities.

With this evidence of the successful use of checklists in mind, Gawande set out to determine how the best checklists are built. That took him to Boeing. The lessons from that visit?

> "Boorman's flight operations group [at Boeing] is a checklist factory, and the experts in it have learned a thing or two over the years about how to make the lists work. … Good checklists are precise. They are efficient, to the point, and easy to use even in the most difficult situations. They do not try to spell out everything …. They provide reminders of only the most critical and important steps – the ones that even the highly skilled professionals using them could miss. Good checklists are, above all, practical."

Practical checklists come in two basic varieties: the DO-CONFIRM checklist and the READ-DO checklist. Practical checklists are lengthy, typically limited to between five and nine items, the limit of working memory. Thus they can fit on one page, without unnecessary clutter and using a font intended for ease of reading. By the way, they cautioned,

> "First drafts always fall apart … and one needs to study how, make changes, and keep testing until the checklist works consistently."

Armed with the results of his research, he returned to his challenge and wrote up a checklist for major surgery. The first draft predictably was thrown away even before its first use was concluded! Revisions followed. Eventually it was time to turn it over to other locations who had agreed to give it a try.

> "I was nervous about the project. … how meager the intervention was when you got right down to it. We'd provided no new equipment, staff, or clinical resources to hospitals. … [In London, a wrong-sized replacement knee was discovered before the incision. In India, they discovered they were administering the antibiotic too early.] But more than that, [in Seattle a staff member] thought that going through the checklist helped the staff respond better when they ran into trouble later … . 'We just work better together as a team,' she said."

The final results showed despite no real increase in skill and no advance in technology, the surgical teams improved their outcomes. The achieved better results from a modest, inexpensive, and easily transferrable intervention.

Of course, very few of us are involved in performing surgery. We may think of ourselves as professionals, but we are not surgeons. Can other professions benefit from the use of checklists? Gawande observes that

> "All learned occupations have a definition of professionalism, a code of conduct. It is where they spell out their ideals and duties. … [and] they all have at least three common elements.
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> First is an expectation of *selflessness*: that we who accept the responsibility for others … will place the needs and concerns of those who depend on us above our own. Second is an expectation of *skill*: that we will aim for excellence in our knowledge and expertise. Third is an expectation of *trustworthiness*: that we will be responsible in our personal behavior toward our charges.
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> Aviators, however, add a fourth expectation, *discipline* … ."

At the end of the book, Gawande includes two sample checklists from Boeing – the *Door Fwd Cargo* checklist for when the forward cargo door on your aircraft fails

midflight and the *Engine Failure During Flight* checklist. He includes the *Surgical Safety Checklist* that he helped develop. He also includes a Checklist for Checklists.

   Now back to my question: Does the premise of *checklist* lend itself to practices such as leadership? Or innovation? Well, I can't answer that with regard to innovation. In the seminal work on the topic, *The Diffusion of Innovation*, Everett Rogers offers 83(!) generalizations on the topic – too many to be condensed into a checklist.[1] But what about leadership? Take Kouzes and Posner's work on leaders' credibility[2]. They write

   "From our analysis of common themes in the cases we collected, we derived six
   practices, which we have come to call the six disciplines of credibility. These are
      Discovering yourself
      Appreciating constituents
      Affirming shared values
      Developing capacity
      Serving a purpose
      Sustaining hope."

   Hmmm … would *that* work as a checklist? It's about the right length. What if each time we interacted with others in situations where we were expected (by others or ourselves) to demonstrate leadership, we quickly ran through this checklist? Probably wouldn't hurt, right?

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[1] However, in chapter 6, Rogers poses five attributes which are strongly correlated to the adoption of an innovation. Might these become a checklist for examining the adoptability of a proposed innovation?

   "*Relative advantage* is the degree to which an innovation is perceived as better than the idea it supercedes. The relative advantage of an innovation, as perceived by members of asocial system, is positively related to its rate of adoption (Generalization 6-1). …

   Compatibility is the degree to which an innovation is perceived as consistent with existing values, past experiences, and needs of potential adopters. The perceived compatibility of an innovation is positively related to its rate of adoption (Generalization 6-2).

   Complexity is the degree to which an innovation is perceived as relatively difficult to understand and to use. The perceived complexity of an innovation is negatively related to its rate of adoption (Generalization 6-3).

   Trialability is the degree to which an innovation may be experimented with on a limited basis. The perceived trialability is positively related to its rate of adoption (Generalization 6-4).

   Observability is the degree to which the results of an innovation are visible to others. The perceived observability of an innovation is positively related to its rate of adoption (Generalization 6-5)."

[2] Kouzes and Posner, *Credibility – How Leaders Gain and Lose It, Why People Demand It*, Jossey-Bass, San Francisco, 1993.