A. 3ページから始まる英文は Adam Gopnik による *The Real Work* (2023) に基づいている。これを読んで以下の設問に答えなさい。

1. ［ （1） ］に入るもっとも適切な語を下から選び，記号で答えなさい。
   (A) As　　　　(B) For　　　　(C) That　　　　(D) When

2. 下線部（2）が意味するところを50字以内の日本語で説明しなさい。

3. 下線部（3）を日本語に訳しなさい。

4. ［ （4） ］に入るもっとも適切な語を下から選び，記号で答えなさい。
   （ア）lacked　　（イ）loaned　　（ウ）longed　　（エ）looked

5. 下線部（5）the ubiquity of mastery の例としてもっとも適切なものを下から選び，記号で答えなさい。
   (a) eighteenth-century inventors
   (b) fiendishly well-trained children
   (c) strange idiosyncratic musicians
   (d) twentieth-century housewives

6. 下線部（6）を日本語に訳しなさい。

7. 下線部（7）によって筆者が何を伝えようとしているのかを，具体的かつ簡潔に100字以上120字以内の日本語で説明しなさい。

B. Respond in English to the following question:

What are you a master of? Describe a skill that you have mastered, or have tried to master. What does this skill mean to you?

You are not required to reference Gopnik's text in your response. Your response will be evaluated on clarity of content as well as vocabulary and grammatical ability. Do not exceed the space provided for this question on the answer sheet.

Doing begins by doubting. That's one of the great lessons we inherit from the scientific tradition. So before we start to do, let us start to doubt. And we can doubt by considering the case of one of the great doubt-provokers of the Enlightenment: the Turk. It was, as you may know, the first great automaton—a chess-playing machine that inflamed Europe in the late eighteenth century. (1) it was not actually an automaton and couldn't play chess didn't alter the effect it had on people at the time. Like many others, I have been fascinated by the Turk since I first read about it, in histories of magic and illusion. Then Tom Standage's fine 2002 horizontal social history of the machine and its times, called, simply, *The Turk*, clarified an often deliberately mystified history.

The Turk first appeared in Vienna in 1770 as a chess-playing machine—a mechanical figure of a bearded man dressed in Turkish clothing, seated above a cabinet with a chessboard on top. Its inventor and first operator, a Hungarian quasi-nobleman, scientist, and engineer named Wolfgang von Kempelen—one of those amazing Enlightenment figures who danced at eight weddings at once and still kept the beat—would assemble a paying audience, open the doors of the lower cabinet, and show the impressively whirring clockwork mechanisms that filled the inner compartments beneath the seated figure. Then he would close the cabinet and invite a challenger to play chess. The automaton—the robot, as we would say now—would gaze at the opponent's move, ponder, then raise its mechanical arm and make a stiff but certain move of its own. Mastery had been implanted in it; a computer, a living brain, had been taught somehow to play chess!

Before it was destroyed by fire in Philadelphia in the 1850s, the Turk toured Europe and America and played games with everyone from Benjamin Franklin to, by legend at least, Napoleon Bonaparte. It certainly once played a game with Philidor, the greatest chess master of the age. The Turk lost, but Philidor admitted that he had been hard-pressed to defeat it, a public relations triumph for Kempelen. Artificial intelligence, the eighteenth century believed, had arrived.

Of course, the thing was a fraud, or rather, a trick—a clever magician's illusion. A sliding sled on well-lubricated casters had been fitted inside the lower cabinet and the only real ingenuity was how this simple machine allowed a hidden chess player to glide easily, and silently, into a semi-seated position inside. There was a lot more room to hide in the cabinet than all

that clockwork machinery suggested.

Now, the Turk fascinates me for several reasons, since it illuminates many odd and haunting holes in human reasoning and in our response to mastery. It reminds us, in Ottoman garb, that mastery is, among other things, a *performance*, and one that depends on our guesses, confident or not, about the identity of the master we're watching.

The first truth it embodied is that, [2] once impressed, we quickly leave the ladder of incremental reasoning behind. Common sense should have told the people who watched and challenged it that for the Turk to have *really* been a chess-playing machine, it would have had to have been the latest in a long sequence of such machines. For there to be a mechanical Turk who played chess, there would have had to have been, ten years before, a mechanical Greek who played checkers. It's true that the late eighteenth century was a great age of automatons, machines that could make programmed looms weave and mechanical birds sing—although always the same song, or tapestry, over and over. But the reality that chess-playing was an entirely different kind of creative activity seemed as obscure to them as it seems obvious to us now.

People were fooled because they were looking, as we always seem to do, for the elegant and instant solution to a problem, even when the cynical and ugly and incremental one is right. The great-grandfather of computer science, Charles Babbage, saw the Turk, and though he realized that it was probably a magic trick, he also asked himself what exactly would be required to produce an elegant solution. What kind of machine would you actually have to build if you could build a machine to play chess? What would its capacities need to be? Babbage's "difference engine"—the first computer—arose in part from his desire to believe that there was a beautiful solution to the problem of what we now call artificial intelligence, even if the one before him was not it.

We always want not just the right solution to a mystery; we want a *beautiful* solution. And when we meet a mysterious thing, we are always inclined to believe that it must therefore conceal an inner beauty. When we see an impregnable tower, we immediately are sure that there must be a princess inside. Doubtless there are many things that seem obscure to us—the origins of the universe, the nature of consciousness, the possibility of time travel—that will seem obvious in the future. But the solutions to their

obscurity, too, will undoubtedly be clunky and ugly and more ingenious than sublime. The solution to the problem of consciousness will involve, so to speak, sliding sleds and hidden chess players.

But there is another aspect of the thing that haunts me too. Though some sought a beautiful solution when a cynical one was called for, plenty of people—Edgar Allan Poe*, for instance, who wrote a long analytic piece on the machine when it toured America, one of his first significant published works—realized that the Turk had to be what it actually was, a cabinet with a chess player inside. [3] What seems to have stumped Poe and the other, shrewder Turk detectives was not the ugliness of the solution but the singularity of the implied chess player. Where would you find a tiny chess genius, they wondered. Or could the operator be using fiendishly well-trained children? Even if you accepted the idea of an adult player, who could it be, this hidden, inscrutable but unquestionable *master*?

It turns out that the chess players who operated the Turk from inside were just ... chess players, an ever-changing sequence of strong but not star players, who needed the gig badly enough to be willing to spend a week or a month working sessions inside its smoky innards. Kempelen, and then after him a traveling showman named Maelzel, who bought and restored the automaton and took it to America, picked up chess players wherever they happened to be. In Paris, when the Turk played Philidor, Kempelen recruited a variety of strong but second-rank chess players from places like the Café de la Régence, the leading chess café in a city where coffeehouse life had bloomed to become a separate civil society of its own. They included a surprisingly tall player named Boncourt; a chess writer named Alexandre; and a now completely unknown chess player named Weyle.

For this was the most astonishing of Kempelen's insights, a sublime shortcut every bit as brilliant in its way as actually building a chess-playing machine. It was that, in the modern world, *mastery was widely available*. None of the names of the chess masters who played as the Turk were particularly remarkable then or famous now. They were students, second-rank players, not an enslaved little person or an inspired child among them. Merely strong chess players who needed the work—badly enough to put up with the discomforts and absurdities of slipping inside the Turk. The operators never ⬚（ 4 ）⬚ for someone to play the role. There was always someone available who was good enough to win, needed the gig, and didn't mind the

working conditions. They would take the job and get inside the machine, get paid for it, and the Turk would move on to its next stop in Boston or Bruges, and Kempelen or Maelzel would go to another chess club and ask, Does anyone who isn't claustrophobic need a job? At one point, on board a boat taking the invention to America, Maelzel actually recruited a young French girl who had never played chess before and taught her a series of endgames. Chess players assure me that these are easier to play than it might seem, but they were still hard enough to add a note of risk.

Kempelen was a genius, certainly. But his genius didn't lay in programming a machine that was capable of playing chess. His genius was that he understood ⁽⁵⁾ the ubiquity of mastery. In a world seeking excellence, with millions of people crowded into competitive cities, excellence becomes surprisingly well distributed. The second-best chess player at a chess club is a far better chess player than you can imagine.

And therein lies what I think of now as the asymmetry of mastery: we overrate masters and underrate mastery. With the Turk, the simplest solution was the hardest, partly because those in the audience underestimated the space inside the cabinet but also because they overestimated just how good the chess player had to be. We always overestimate the space between the very good and the uniquely good. That inept soccer player we whistle at in despair is a better soccer player than we will ever meet. The few people who do grasp the asymmetry of mastery tend, like Kempelen and Maelzel, to profit greatly from it. ⁽⁶⁾ The greatest managers in any sport are those who know you can always find new and "lesser" players to play a vital role.

The sociologist Howie Becker tried to systematize this insight. The distinctive thing about "creativity," in his view, is not that it's rare but that it's so *common*, if often misidentified. Some of the most seemingly creative professions—for instance, playing classical music with an orchestra—are in fact the most routinized and rule-bound; others that we typically don't even count as creative—such as a woman at home cooking for her family (he was writing in the 1950s)—face new predicaments and find genuinely creative solutions. As with my mother, the mastery itself is not difficult; recognizing it, organizing it, rewarding it, *that's* the difficult part, and often subject to haphazard prejudice, not to mention, of course, deeply implanted bigotries and social oppressions, of the kind that reduced many brilliant, inspired home cooks to the status of "housewife."

And what of the handful of true, undisputed masters? What makes them unique, I've come to think, is not so much virtuosity but instead some strange idiosyncratic vibration of his or her own. What we call genius is most often inspired idiosyncrasy, and sometimes even inspired idiocy. Bob Dylan* started off as a bad musician, and then spent 10,000 hours practicing. But he did not become a better musician. He became Bob Dylan. And it should be said that some of those who possess ultimate mastery, as Bobby Fischer* and Michael Jackson* conspire to remind us, have hollow lives of surpassing unhappiness, as if the needed space for a soul were replaced by whirring clockwork. Perhaps our children sense this truth as they struggle to master things.

But of all the reflections the Turk may inspire, still another is the most important. It was the orchestration of effects *around* the Turk that elevated the merely okay player to exceptional player. It was not the clockwork specificity of the machine but the totality of the effects—not the automaton itself but the atmosphere around it—that made the idea work, that gave the impression of mastery. The Turk was a physical frame in which a chess player could, however uncomfortably, play. But it was also a kind of psychological "frame," an envelope of expectations that magnified the power of the chess player inside.

For the other thing that Kempelen understood is that once you put a very good chess player into a very impressive-looking and mysterious-looking piece of machinery, he or she becomes a *great* chess player. Excellence always takes place within a context of performance. The power of the machine lay in how it urged people to project onto it powers that it never possessed, but that, by the act of sympathetic imagination, became possible, and, in a wonderful natural joke, eventually realized. Crediting the machine with more than it could do, the audience made the machine more credible. [7] Who was inside the machine? You were.

---

*Edgar Allan Poe (1809–1849): An American writer.

*Bob Dylan (b. 1941): An American singer-songwriter and the 2016 recipient of the Nobel Prize in Literature.

*Bobby Fischer (1943–2008): A prominent American chess player.

*Michael Jackson (1958–2009): An American pop musician.