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The Mystery of Mastery

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SPEAKERS:
Adam Gopnik

Speaker 1: Good afternoon. You're attending the session on the anthropological insights into extinct languages. So, I'm happy you're here. Thank you for laughing. My name is Eric Motley, and I work here at the Aspen Institute, and I'd like to thank all of you for coming to the Ideas Festival, and participating in this wonderful exchange of ideas. This session is about the mystery of mastery, and of course Glen Gould the pianist, the Canadian pianist comes to mind, and he wrote "Art is not a momentary ejection of adrenaline, but rather a life long construction of a state of wonder and serenity."

Adam Gopnik really needs no introduction, there are very few writers who write with such clarity and such beauty, and who write with such breath, from Lincoln to Darwin, to art, to politics, religion, to Emerson, to Shakespeare, and so it's a great honor to have you Adam here with us, to help us to think more clearly about, how do we perfect these talents that we've been given, and what is the real mystery behind the mastery of these ideas. So, Adam welcome to the stage.

Adam Gopnik: Thank you. Thank you all for coming on this warm and beautiful afternoon. I want to talk to you today about many things, and the number of things I'll talk to you about will probably seem to some degree bewildering, but at the foundation of them all is a preoccupation that I developed a few years ago, particularly when my kids were in school, just in grade school, and middle school. And, that was preoccupation with the difference between accomplishment, and achievement.

I wrote a piece in The New Yorker, not long ago, about new books on child bearing, where I try to elaborate a little bit on that distinction. We live in an achievement driven society in which our kids are perpetually being pushed towards the next achievement, the next test they have to pass, the SATs. We all know the kind of mad, red queen's contest that happens in, we invent achievement tests which will be completely immune to coaching, and therefore we have ever more expensive coaches to break the code of the non-coachable achievement test.

We drive our kids typically towards achievement, and it affects the way they get into college, it affects the way they go forward in life, and yet anyone who is a parent of any sensitivity at all, recognizes that what really stirs and moves children, just as it stirs and moves ourselves, isn't achievement, isn't the "A" you get on the test, or the score you get on the SATs, however instrumental that may be to some larger ambition. No, what really moves, and stirs us is accomplishment, it's that moment of mastery when suddenly feel in the flow, when we feel something profoundly difficult, tenaciously thorny has given way, and we are now the master of it, instead of us being mastered by it.

I felt this way very strongly when I watched my son Luke, who I'm delighted to say he's in the audience this afternoon, and will be engaged in the ferocious fact checking of everything I relate to you. Somebody said once, and I think it's true ... we've been talking a great deal here at Aspen Ideas about the rights and

wrongs of the iPhone, and of social media, technology, and so on, and the one thing I can say with certainty, is that the iPhone has eliminated expertise as a category, because you're talking about eulogies, and eulogies on stage, and the kids in the back row have already googled it, and know the answer before you raise the question.

I watched Luke become a master, become enormously accomplished and doing all kinds of things, particularly in doing card magic, one of the most fascinating things that you can possibly master, and I realized that, that active accomplishment was far more stirring for him, than the countless achievements that he was being asked to encounter, the kind of perpetual hamster wheel run of achievement, that's so much part of the fabric of an American childhood, and of an American education.

And, I go preoccupied by that, and I got to thinking about the nature of accomplishment, and more broadly about what I like to call the mystery of mastery. How is it, that we go about mastering difficult things, what is it that enables us to take something that seems to us, when we start it almost impossible. Doing the Erdnase color change, or learning how to play Beethoven on the piano, and then find ourselves, not that far into it, a year or so into it able to do things we didn't think we could do. What is it that enables us to do that?

And so, I began writing a series of pieces for The New Yorker magazine, where I work, just about the difficulty of doing things. One of the hidden pleasures and gratifications of writing for The New Yorker is, that you can assemble books surreptitiously in it's pages, and then you publish the book, and no one is aware that they have been the accessory, the instrument of your surreptitious assembly, until the book is out, and I've done that and several occasions.

And, at some point I'm going to turn these set of essays into a book as well. I'm about three contracts behind right now, as all of you know, who are writers yourselves, who are close to writers, a writer is always about two book contracts behind, and you're in a perpetual condition of being a share cropper on a southern plantation, constantly turning in the cotton, and always getting further and further into debt.

And, when I try to do that book, which is about all of these little masteries that I've attempted over the last few years. I've learned how to do life drawing. I've learned how to drive, which will strike most of you as a not particularly stirring accomplishment, but you have to understand that for someone who moved to New York at the age of 20, and only began to study driving at the age of 58, and actually got his license on the same day as his 20 year old son ... only father-son duo ever to do the driving test in New York today, one right after the other, and we both passed, you'll understand that driving was an enormous accomplishment for me at that point.

And, it fascinating to think about that, just parenthetically, because all of you, I bet almost everybody else in this room has been driving since they were a

teenager, don't even think of it as something difficult to do, but trust me, if you come to it in early middle age it will seem to you one of the hardest things you ever have to do. Not only does it involve the coordination of many unrelated skills, it also is incredibly dangerous. We don't know how dangerous it is until you haven't done it, and you're 58 years old.

Tried all of these things. I've learned how to care for a dog, I've learned how to play the piano, and all of these things together lead me to ask the question "What is it that mastery has to offer us, and what are the clues, the signals, the significant elements that enable us to master something?" Magicians ... and, I got very wrapped up in one of the things I got fascinated with in this pilgrimage through mastery was magic.

Luke led me into that world and I spent fascinating weeks in Las Vegas and elsewhere studying what magicians do. And, magicians have a beautiful term. They talk about "the real work", and what they mean by "the real work" ... they'll ask each other, and magicians have the most beautiful shop talk of any artisanal people in the world, because the only ones they're allowed to talk to are each other. Most of the rest of us, when we're talking shop talk, it doesn't matter if people of the table don't entirely know what we're talking about, magicians can only talk shop talk with other magicians.

And, they have a beautiful phrase they use, "the real work". And, they'll ask each other "Hey, on Flosso's miser, who got the real work on that?" Or "Who did the real work on that?" And, what they mean by "the real work" isn't who invented the trick, or who was the first who could orchestrate the effect, they mean by it, who was the first to put everything together, to orchestrate the entirety of the trick, the gimmick, the effect, the costume, the approach, the misdirection, and really make it work. Who's got the real work on it?

And, when I heard that phrase it became hugely significant to me, because we all intuitively understand what it is to have the real work on something, and we all know in our own fields, who's sort of got the work, who maybe originated some of the work, but who really has "the real work" in a craft, or in a particular technique. And, if ever get this book written, that's what I would call it "the real work". And, I became fascinated in this question of "What the real work is, and how it operates?"

First slide. Can we go back one? Thank you. I'm now going to take what will seem to you like and exasperating digression into a story about an 18th century automaton. At the end of the talk it will either seem to you still terrible digressive, but less exasperating, or even more exasperating, but less digressive than it seemed at first.

And, wanted to talk to you about "the real work", and the nature of mastery, and above all the interaction between our minds, and other minds that are performing for us. This is The Turk. This is a chess playing automaton, that was one of the phenomenon of Europe and America throughout the end of the 18th

and the early part of the 19th century. It was invented and first displayed by a man named Kempelen, and what it did was play chess. And, it defeated pretty much everybody who ever attempted to play chess with it.

And, what Kempelen would do was open up all these drawers as you can see, and show the amazingly complicated assembly of cog wheels that sat within it, show that there was seemingly no room for anyone to fit inside it, close it up, a chess player would come forward, The Turk would make a robotic move, and then continue to play, and this thing defeated Napoleon, and Ben Franklin, and a whole range of people, toured throughout Europe, eventually ended up in America, and was one of the great and fascinating conundrums of its time, because everyone was asking "How does this thing work? How does it work?" The apparent answer that Kempelen wanted you to get was it works, because it's a what we now call a computer. It's a robot that's been instructed, that's been automated to play chess by some brilliant and mysterious process, and that's how it works. It's a chess playing machine.

Now, if you stop to think about it for a moment, you can see that, that was an absurd conjecture to make, even though most people made it, because if you're going to have a chess playing machine, a machine that can defeat everyone in chess, you would first need to have a checker playing machine. Right? You would first expect to have a tick tack toe playing machine. Simpler machines that would then move in that direction. So, the idea that you would land eureka like on the chess playing machine right out of the box seems in retrospect absurd.

But, people who sensed that and knew that it probably wasn't actually a chess playing computer tried to guess what else it was. The notion that it might be a chess playing robot, or computer was so intriguing that Richard Babbage, the great grandfather, the real progenitor of modern computing saw it, and asked himself the question "If you were to build a machine that could play chess, what would be the constraints, and the premises, and foundations you would have to have?" Knowing that this wasn't it.

A lot of other people tried to guess. Edgar Allen Poe wrote a once famous essay about The Turk. Oh, and by the way ... Can we go back to The Turk there? Can I ... there he is. I was once giving a variant of this talk and somebody, furiously was raising their arm in the back, and I called him, and he said "That's not a Turk, it's an Ottoman. So, it should really be called the chess playing Ottoman." But, everyone called it The Turk.

Edgar Allen Poe wrote and said "It obviously isn't a machine, but there has to be a chess player concealed within it working the pieces by means of levers, but if you look at it you see it has to be a very tiny chess playing master. So, Kempelen must have found a midget chess playing master, who he addicted to opium." In very Edgar Allen Poe fantasy, he addicted to opium in order to get him to continue to play chess, because why else would someone fit inside this machine. A genius midget chess player, or maybe it was a child, other people

speculated, who would similarly have been abused, and pushed inside this thing.

Well, the answer ... Oh, and here's a reconstruction of The Turk, made by the American magician, illusionist John Gaughan just in recent years. You can actually see this thing, it's on display in Los Angeles, well worth the visit. Well, the answer was simply that there was a chess player inside it, and he was on a little sleight that move back a forth, ingeniously on casters, and he just sat inside and worked it around. Here's the truly fascinating thing though about The Turk, and the nature of the mastery that so fascinated all of Europe and America at that time, when it was displayed.

It's that, there was no chess playing dwarf, or midget, or genius inside it. What Kempelen would do, is ... and then, the later, secondary figure would take over the chess playing machine in America, The Turk. What he would do, is he would go to a city, go to Vienna, or Paris, or London, and he would go to the local chess club, and he would say "Does anybody here need a gig, and doesn't mind very close working conditions?"

Wherever he went, he would do it, and he would always find a strong chess player, who needed the money, and would play inside The Turk. Get on that little sleight and play as The Turk. Now, think about that for a moment. Kempelen was really a genius, he was truly a genius, but his genius in understanding the nature of modernity wasn't in being able to build a chess playing machine of enormous ingenuity, it was understanding intuitively, that in modernity, mastery was very wide spread.

There are a lot of very, very good chess players in the world, and you can usually find one when you need one. And, if you stop and think about your own experience of mastery, great violinists, great pianists, great chess players, you'll be aware that right below the level of the names we all know, Glen Gould for instance, there's a huge class of people who are very, very good at it, but who still need the work, and are willing to get inside a smoky little machine in order to make some money.

Luke and I were talking once. Luke moved on to music later in his life, guitar particularly, and we were talking about the pros and cons of being a guitar player, and we happened to go to a cocktail party, that someone was giving for Boardwalk Empire the gangster program set in the 1920s, and there was a kind of make-believe Great Gatsby style jazz band playing there too, with a guitar player dressed up with a Borsalino, and spats, and the rest of it. And, Luke said to me "Dad, you see that guitar player? He's one of the best guitar players I have ever heard. And, he had to dress up in Boardwalk Empire clothes to make a living."

There's a lot of mastery available in modernity. That's a fundamental truth about it. So, one of the other great insight that Kempelen had in making The Turk ... And, here you see another cross section of it to get a sense of how it

worked, was that if you took a reasonably good chess master, and you put him inside this very intimidating apparatus, this apparatus that in effect cast a kind of aura, and a spell of its own, you could turn a good chess player effectively into a great chess player. You could create an environment in which there was sufficient mystique, allure, misdirection to make a very good chess player into an almost infallible chess player.

That was "the real work" in the magician sense on The Turk. It wasn't that there was simply one great chess player hidden inside it, it didn't have to be a heroic solution, it was the combination of all of these elements, that created this enormously powerful illusion of mastery which befogged, and bewildered, and enchanted all of Europe and America in the end of the 18th century.

I think that, that's a useful model for beginning to think about the mystery of mastery. That it isn't simply that there are geniuses and masters in the world who are capable of doing something that no one else can do, but that mastery works within a context of performance, always, and that we need to understand the context of performance, of expectation on the audience's part, and of skillful display on the presenter's part in order to understand what mastery is.

It seems fair to ask if there are rules, habits, typical things that happen, that enable that kind of mastery to proceed, and if that model of a kind of contextual performance "the real work" of mastery understood in a much larger frame, than simply the frame of individual genius, or individual power.

PART 1 OF 3 ENDS [00:19:04]

Adam Gopnik:

Than simply the frame of individual genius or individual power. If that has significance. Meaning, value, elsewhere. Well, the next step I took after living among magicians for a while in this pursuit was to study life drawing. Go to work to study life drawing.

Now I had been an art critic for many years who did not know how to draw. This is epidemic among art critics, actually. Very few art critics know how to draw. And I had a whole rift and way of explaining why it didn't matter that I didn't know how to draw. Most of the contemporary art that art critics look at typically doesn't involve highly skilled artisanal drawing. You don't have to have hands to have a good eye. You have a whole wrap you develop. It's like an alcoholic. Who explains to you always, it's just social drinking I can stop at any time. When you know inside that he has a real problem.

And I had a real problem, which is I was inclined to write a great deal about graftmanship good and bad without having any actual hands-on, fingers, engaged experience of how to do it.

So I went to study with a master. A remarkable drawing teacher in New York City named Jacob Collins. Jacob is a fascinating guy. We're more or less the

same age. We both have kids in the same school. We are sort of in that way interchangeable figures as social creations, as social constructions. With the one fascinating difference that Jacob actively hates modern art.

And when I say Jacob actively hates modern art, I don't mean he doesn't like Jeff Koons and Damien Hirst and all those things. I mean he hates Monet. He hates Cezanne. He thinks that art took a fundamentally wrong turn sometime around 1855. And it is his historic mission in life to turn it back the other direction.

So he has revived and teaches all of the techniques and the manners of classic Bogart's drawing rooted in life drawing and drawing from the model. And I wanted to study with him. I knew I could find another drawing instructor to study with who was much more permissive and would have the kind of put it up on the refrigerator attitude that we all like to have in our instructors. But I thought it would be really interesting to study drawing with a hard ass. With somebody who would be completely resistant to my own scrawls and would demand that I achieve a certain level of mastery if I was to count as all as a student.

So for two years, I went to Jacob's studio, day after day, time and again, and I would sit there and in Jacob's company, I would draw the rumps and shoulders and backs of naked people who were being paid to lie out there and let us draw them.

Now, it was a fascinating thing to find out what was involved in learning how to be certainly not a master like Jacob Collins, but at least in getting some understanding of what it was to have some mastery of this ancient and remarkable art of life drawing, of classical drawing.

You might think the natural thing that you would think is that the way you learn to draw is to start off with what Jacob calls your symbol set. Symbol set simply means the kind of natural set of conceptual shapes that we all call on when we're drawing. You know how that is, kids do it all the time, you have faces, a big circle with two lines and you have a straight line and then a half circle below, right? Human body is composed of one sphere and then two below and so on.

We have a whole complicated symbol set that show ... or simple simple set that we use to depict the world houses look like this with little pointy roofs. Smoke is a squiggle and so on. Which is informative, communicative, we can use it to communicate but doesn't conform very well to the actual appearance of objects under light as we inspect them in the real world.

One thing you might think then is what you have to do is lose that conceptual apparatus, lose that symbol set and begin looking at the world as it really is. Really paying attention to the way the light, this beautiful afternoon light, is falling on Karen, here in the front row. And simply beginning to lose your symbol set and you begin then to follow, to describe accurately, what the light playing

on Karen's flesh and beautiful blonde hair actually looks like. That doesn't help you at all. You can't get anywhere forward with that notion.

What Jacob would have me do, hour after hour, in the studio, and not me alone but, there's other students so, he gave me special attention because I was sufficiently [inaudible 00:23:48]. I don't think he wanted me too much in the company of other students for fear the effect I would have on them. Like having kudzu weed in a beautiful garden. Crabgrass would corrupt.

What he asked you to do. What he said to do is to look at the thing you were looking at. To look at the side of Karen's cheek for instance, and lose your symbol set. Stop trying to look at it in terms of the normal, conceptual apparatus that you bring to it. And instead, look and find, and search in it and find other familiar shapes that you had never thought to see before.

So he would say to me, do you see there? It's this map of a little African country, that kind of irregular round? Or don't you see, and we were drawing a naked man named Nate, don't you see in Nate's back how there's kind of a profile of a snooty butler looking up? Arrive at those. Find those conceptual shapes and draw those. Look at the pattern of light as you see it on a human body and name, articulate to yourself what those shapes are. The little African country, the snooty butler, the bottle of ... milk bottle. Those strange, irregularly key shaped lines and depict those. Make those your job to show.

And indeed, that's exactly what I would do, time after time. And that's exactly how you begin to learn to draw. You don't simply lose your existing conceptual set and begin to draw the world as it really is. You discard one set of concepts, one symbol set, and you try to engineer to improvise a set of symbols that will be your own, that do the necessary work of breaking you out of your expectations, and also allow you to create, to orchestrate, a whole set of sub-routines that put together, enable you to begin to draw something like what you see in the world. That's as good as I ever got, actually.

That's how the art, the craft, the mastery of life drawing proceeds. You don't simply lose one set of things and then begin to look at the world. You develop these sub-routines and are able to do it in that way. And if you think about it, that's broadly true over just about any kind of artisanal craft you set out to master, or to understand. We don't learn to play the piano by being given a piece by Beethoven, which we play badly and then we go on playing it badly, and we get a little bit better, and each time we get better until we're good. Nobody can learn to play the piano by being bad at Beethoven or The Beatles and then incrementally getting better at Beethoven or The Beatles.

What the piano teacher does is give you a whole set of tasks which develops skills, these sub-routines, which you then begin to put together in a way that eventually enables you to play Beethoven. Still, somewhat badly, but nonetheless enables you to do it. So that mastery isn't made up of the slow progress up a mountain of acquired finger skill. It's made across the expanse,

the horizon, of one by one, picking up these sub-routines, these secondary skills which, with sufficient ingenuity, and above all, with adequate patience, you can begin to compose into a craft. And actively compose them into that craft is where the fact and the idea of mastery begins, where the mystery of mastery begins to get solved.

That's something I found everywhere I looked. In each of these investigations, explorations that I attempted of learning how to do things in middle age. Even learning how to ... here's Jacob actually drawing the same guy, just so you understand how much farther one has to go. But even in Jacob's enormous masterly depictions of a nude body, what we're looking at is not simply a kind of blank photographic representation or rendition of it. We're seeing the acquired craft of 30 years of teaching yourself all of those sub-routines, all of those ways of breaking conceptual set to make something that strikes us right away as having fidelity, representational fidelity to the real world.

It's even true, if you like, about learning to drive. Now as I said before, most of you have not stopped to think about how you have to put together a group of odd sub-routines which don't seem to be directly related to the main task when you learn to drive. Because most of you I suspect learn to drive, as I said, when you were kids, when you were 14 or 15. And that's the age of maximal skill learning, when we do it without being aware of how difficult it is to do.

But I had a wonderful driving instructor named Eduardo Peruvian. What Eduardo was doing was teaching you how to pass a driving test. So instead of teaching you necessarily how to brake the car and start it up, you learn that too, what he taught you were the set of routines, the subset of skills that you needed in order to pass the driving test. So his two models were be the noodle, in other words be totally relaxed at all times. Be the noodle because that's what impresses the driving instructor, is a relaxed driver. And the other thing was, be the busy bee. Constantly be in motion in the car. Looking out. Be looking back, show that you are fully engaged in the activity. That's how you communicate to a driving instructor, to a driving tester, judge, your mastery of the art of driving. It's not simply being robotically in the place and being able to go and stop, park. Do three point turns. It's showing that you're fully engaged in the activity. It's a human performance, very much like the performance of the [inaudible 00:29:52] in a certain way.

So that general rule is one that I found to be true in almost all of the skills that I set out to learn or to at least explore well enough to get some kind of first level, primary illusory skill at being able to do.

Music is a particularly fascinating one because music presents for us the problem not just of how it is that we're able to master a difficult seeming craft, how do we go from being able to draw nothing except a little pyramid and a palm tree to being able to do something, as I said, not by me, but people, better students than I am, can master that.

Music presents us with a particularly interesting and even more complex problem. Because with music, we're not just looking at the problem of how you master the keys of the piano or the strings of a guitar, we're looking at what for me is the single most interesting question in all the realms of human psychology or human behavior. That is, how is it that the mind takes sound, mathematical sound, and makes it into music, and then takes music, and makes it into meaning.

Think about that for a moment. I get a program with the wonderful New York orchestra, called the Orchestra of St. Luke, not long ago, where I talked about the role of Schubert in my life while they played Schubert, not at the same time, interstitially, I spoke and they played. And what was so interesting is so many people came up to me afterward, I had been talking about the many stages of Schubert, listening to Schubert and being affected by Schubert in one lifetime. So many people came up to me afterward and said, yes that's exactly my experience with Tchaikovsky or Mozart or Dave Brubeck, whomever it might be.

We use music to make the map of our emotional lives. It's an astonishing thing when you think about it because the thing you're experiencing is a set of mathematical relations of waves, of acoustic waves, that are impinging in our ears.

It's such an interesting question that it's actually one that clearly has some kind of mechanical coding in our minds. I was doing a program not long ago, for The Moth, the storytelling show, the storytelling group that I had belonged to and participated in. And one of the storytellers, a fascinating guy, on the spectrum autistic, broadly speaking, who had spent his life as an audio engineer. Many had received treatment, it's a true story. He had received treatment for his disorder, "autism" let's call it in appropriate quotes and brackets. He had received treatment for autism as a kind of micro electronic stimulation that they're able to do now that seems to have success in certain cases, and suddenly, music with which he had been technically and microscopically engaged throughout his whole grown up life, suddenly music came to life for him as emotional force.

And he described, it was enormously moving, driving down a highway and having on music that he had actually recorded and suddenly being struck as if by a wave, a thunderbolt, of feeling with what the actual subject of the music was. He was overwhelmed by this emotion and so much so that he had to stop his activities, his professional activities, as an audio engineer for a while because he couldn't make the connection properly. He could no longer go on doing the incredibly precise, microscopic work that he had to do as an audio engineer because he wasn't any longer hearing music as math. He was hearing music as mood. He was hearing music as emotion.

You can hear his story. It's on The Moth webpage. So I went up in the course of learning to play the piano and becoming fascinated by this question of how music moves us. I went up to Montreal. To McGill, my alma mater. There's a

wonderful program in McGill of people who are engaged in exploring and investigating just this question. Psychoacquisitions they're called, or just psychologists of music, who look just at this question of how is it that we turn music into meaning.

A fascinating study that was being done, financed I might add by this invention from the Canadian government, which I suppose suggest some of the ways in which Canada and the United States are different, in which you could program a modern player piano, an electronic piano, to play a Mozart piece with different levels of imperfection. In other words, with different fidelity to the written tempo, particularly. And what they discovered was not something that will surprise anybody whose a music lover but nonetheless was remarkable to see being instantiated as an equation, as a formula. People don't like and don't find meaningful music that's played directly on tempo in monotonous, uniform, rapid, robotic regularity and they also don't like music that's played with random variations in tempo and dynamics and the rest of it.

There's a particular sweet spot that seems close to, and again put the word in bracket and quotes, seems close to universal. Where exactly there's a marriage of fidelity to the written score and the signs of human imperfection allowed to filter through.

Because if you think about it, all of the expressive elements that we associate with music, legato and vibrato, they're all ways of instantiating and to a certain degree even of impersonating, human error in sound. Vibrato is wavering back and forth between two sounds, legato is trailing just a little bit behind the beat. All of the things that we love and that we will respond to when we hear any music depends upon a great musician's ability to insert the appearance, feeling, the illusion of human imperfection into what would otherwise be a merely mathematical display of sound.

I was once talking to the great pianist, Mitsuko Uchida, who I think is supreme among Mozart pianists in our time. And she told me a remarkable story about this. When she was first studying piano in Japan, it was when classical music had just begun to come into Japan, and it was still being taught in a hugely regularized way. And Uchida as anybody knows, if you've had the privilege of listening to her, is one of the great italicizers in the art of performance. She manages to find all of the lags and italics, the hesitations, the abbreviations, the epigrammatic force in a single phrase of Mozart to an extraordinary degree. And she was doing that instinctively. Being instinctively musical.

And her piano teacher, Japanese piano teacher, would penalize her and punish her for inserting that element of deliberate imperfection into the performance. In so far that he could see, that was all wrong. That was against the performance tradition that he was trying to teach. And she had to fight and struggle and eventually come to the West to be able to do it.

So two things seem terribly important when we're thinking about the mystery of mastery. What it is that enables us to master things. One is it seems to unite so many different kinds of skill and crafts, even arts, that we set out to learn. One is the business of learning and compiling and and compounding sub-routines. Breaking everything down into smaller, alien parts in order to build them up into a recognizable whole. We don't go and look at the naked body and search for the truth of light as it falls on flesh. Instead, we seek out those little African countries, those outlines of the profile of the snooty butler in order to revivify our symbolic sets and in order to -

PART 2 OF 3 ENDS [00:38:04]

Adam Gopnik:

... vivify our symbolic sets and in order to catapult us into craft. That's one truth.

Second truth is that imperfection, the appearance of imperfection even if you like the impersonation of imperfection, plays a hugely important role in the communication of craft from one human being to another. That leads me back to magic and it leads me back to the Turk. Because along with that wonderful expression that magicians use, the real work, another terribly important thing that magicians talk about in secret, in confidence late at night, when they're at that table of shoptalk with each other is what they call Too Perfect Trick Theory.

Too Perfect Trick Theory is simply the theory that says any trick that is perfectly done will be of no interest to an audience. Because even if the audience doesn't know how it's done they will know that it's being done and they will lose all interest because they will simply put it in the arsenal of, oh, gimmick effects.

If you're doing the cigarette through coin effect, for instance. You stand there and you have the coin and you put the cigarette through it. Everyone in the audience knows immediately there's a hinge somewhere in the coin, right? Now you may not know how the hinge works. You may not be able to see it. You might not even be able to operate it yourself but the nature of the effect is immediately apparent to you. It's too perfect a trick.

If I ask you to pick a card and you pick a card and I say, "Look under your seat right now" and the same card is there, you will know that the choice was not fairly made. Right? You'll instantly know. Even if you don't know how I did it you'll know that that's the nature of it. It's too perfect to be interesting as a trick.

What magicians do, what they spend their whole lives doing, the real work in which they engage throughout their careers is exactly finding ways to open so many possible logical doors to you that you don't know which one is the wrong door that you're going down. In other words, the magician with the cigarette through coin will palm the trick coin and give you another coin to investigate. He'll create many different possibilities with which you can understand it.

There's no better illustration of the workings of Too Perfect Trick theory than the Turk, than the ... Let's go back to 'em. Than the apparatus which so confounded ... Can we find it? And astounded Europe. Exactly the force of the Turk, or the Automaton, is to open, in that case literally, so many doors which seem to point in so many directions of possible mechanical ingenuity in terms of astonishing advances in robotic intelligence that the simplest solution, that there's a man inside on a sled, is the last solution anybody would arrive at.

You think about it. If you just had a box with chess pieces on it that was moving back and forth you would know perfectly well there was someone inside it. It was this elaborate arsenal of illusion with which Kempelen reinforced his demonstration, with which he reinforced his apparatus that gave it authority and gave it presence as illusion.

That leads me, finally, to a reflection that comes out of many things that we've been talking about this weekend, the nature of communication. Mastery isn't just something that we do in isolation. It's not just something you can do in a closet or in your own bedroom. It only has meaning if it's done within a social context. And as I've been trying to suggest and to sketch to you today, that social context is a context of interactive, dynamic exchanges in which the Turk works for us and astonishes us exactly because so many doors of possible explanation are opened up to us. In which a great piano player like Uchida registers for us as a transmitter of emotion exactly because she makes us enter into the game of interpretation where what we hear is not simply the music being played but the musician playing it. That's what mastery is all about and that's what makes mastery possible.

Therefore, when ever anybody talks simply about manipulation I'm always a little bit put off. That's not my experience of how mastery works, when we talk about manipulation in the world of social media, when we talk about manipulation in the world of digital media. What I think about again and again is the nature of communication between people and how mastery really works. We bring to every performance that we experience in the world, whether it's an organized performance on stage or it's the simple performance of our iPhone, we bring a kind of meta awareness. We bring what we call critical intelligence to it.

Nobody goes to a magic show thinking that they're seeing magic. Everybody goes to a magic show knowing that they're seeing a display of human ingenuity and what we delight in is seeing how the magician will compel us to wonder about how he or she could possibly have done that. That's the core event. That's the core activity that not only makes mastery possible but that makes mastery communicative. It makes us understand what mastery is.

That's exactly the sense in which, I think, we need to understand the connection between music and magic, between the iPhone in your hand and the Turk on stage in Baltimore in the late 18th century. Whatever the context of communication might be the empathetic exchange between minds is satisfying

only when it's dynamic, unfinished, unresolved. Friendships, flirtations, even love affairs depend, like magic tricks, on the constant exchange of incomplete and tantalizing information.

Frauds master our minds and only frauds master them. Real masters like poets and lovers engage them in a permanent maze of possibilities. The trick is to renew the possibilities. That's how we see mastery going forward in the world. To keep those possibilities from becoming too schematized, to let them be imperfect. And the question between us as would be mastering an audience, is always not, "How did you master me?" but "Which of us is truly the magician?"

Thank you so much. I'd love to take some questions. We have six minutes for questions. I know I've thrown a lot out at you. I'd be delighted to answer ... yes, gentleman, here. Just stand up and speak and I'll repeat the question. Oh, we have a mic? Great.

Speaker 2:

Hi. That was so fun. You talked about how the social context gives it meaning, gives mastery meaning. I often hear, when people talk about leadership, the leaders talk about what their leadership traits are. But there's some deep kind of learning in mastery of leadership that the leader creates the group and the group creates the leader. They're actually a symbiosis. It's not one or the other. Tell us a little bit about, not just the social context, because I guess the interaction is important, but how it pushes the person trying to be more of a master, that sort of pressure to explore possibilities because of the feedback loop.

Adam Gopnik:

I wrote an essay once called, "The Last of the Metrazoids", about a great teacher, the greatest teacher I've ever known, art historian called Kirk Varnedoe, who I was lucky enough to have as my own teacher in art history before I became an art critic. It was about the last year of his life. He was dying of cancer. He sat himself the task of teaching a group of eight-year-olds to play football. He loved football and he wanted to do it. As I describe in that piece what he did was very much what I'm describing to you now. He realized you couldn't teach eight-year-olds to play football by drawing up complicated plays for them and getting them to execute them. He showed them how to do a three-point stance. He showed them the basic blocking position. He broke down this immensely complicated activity which in lots of ways was way beyond their capacity to acquire into a series of small obtainable steps. And that was the whole of what he was able to give them.

I wrote at the end of the piece that I was struck in watching him work. I had seen him work with graduate students but I had never seen him work with eight-year-olds before, but it was exactly the same process in both cases. This process of breaking down the perplexing field of investigation into its smallest component parts and then building it back up out of those parts.

I wrote then, and I was struck by how little mystique he imbued into this exchange. I wrote that gurus give us their system and themselves and real

teachers give us their understanding and then ourselves. I think that's the difference between a guru and a teacher and that's exactly what great teachers do. Great teachers have insight into exactly what I've been trying to talk to you about today instinctively or by a habit. They're the people who are able to teach you what those missing subroutines are and they're also the people who are able to teach you what the broader context of meaning.

Kirk said something wonderful to me once. I said to him, "Why didn't you become a football coach? Why did you become an art historian?" And he said, "Well, to be a football coach you have to be smart enough to do it well and dumb enough to think it matters." I always have taken those words with me, right? What the great teacher does is he's smart enough to break it down and smart enough to explain to us why it matters, why that exchange between a performer, a football player and his audience has significance, is worth doing.

Someone else. Gentleman here.

Speaker 1: Yes. I'm curious about your personal experience as you dissected the processes of the different areas that you went into and I'm curious if the magic for you is diluted because you were understanding the process. Whereas, I look at Jacob Collins and I say, "Wow, that's incredible." I don't exactly how he did it but I'm overwhelmed by the beauty and the power of it. Would your admiration go up as you understand the difficulty but your magic diluted?

Adam Gopnik: It's a good question and the answer to both questions is, no. The thing about magic is, and this is something that magicians are hugely frustrated about. I have a dear friend who was my son's mentor and teacher, a great magician named Jamy Ian Swiss. He said, "The frustration about being a magician is in every other art form technique has to be transparent and in magic it has to be invisible."

What we're not aware of is the technique. In other words a magician doesn't get up and turn a key in a box into a trick. But doing, this is what I was trying to say, the real work in an impressive illusion, like the illusion of the Turk, right? It only has effect because Kempelen worked out this elaborate apparatus. There was smoke and movement and showing you the things. When you know how it's done it's even more impressive, right, because you're aware of how much the illusion is being orchestrated by a great conductor.

Similarly, with Jacob's work, what was astonishing and seeing how those drawings got built up week after week was seeing exactly that it wasn't that Jacob, as I said before, it wasn't that Jacob was in some kind of magical harmony with the thing he was looking at. It's that he had this enormously complicated set of skills that he had earned and learned over time. One of the things that he taught me was what he called the eloquence of the eraser. If you erase a line it often become much more lucid and evocative than if you have the firm outline of 15th century Italian drawing or something.

On the contrary, the deeper you go into mastery the more impressed you become but you're not impressed by the, "Oh, my God" of it. You're impressed by the, "Look at that of it" more and more.

Someone else. Gentleman here.

Speaker 3: I was impressed with how qualitative and case study based your analysis was. I come from a more medical, scientific background, but there' data on 10,000 hours of a required task I'm sure we're familiar with. Can you compare and contrast those two methodologies to assess mastery?

Adam Gopnik: The 10,000 hours one in my own?

Speaker 3: Right.

Adam Gopnik: That's very funny. Maybe that's a good place to end, actually. Everyone here knows Malcolm Gladwell's popularized the idea of 10,000 hours, right? That there is no such thing as talent. There's just 10,000 hours of work that you do in order to master. If you're the Beatles in Hamburg you go in as unskilled musicians, you come out as the Beatles. That's an example he gave in 10,000 hours of playing.

I guess it was about 10 years ago, Malcolm Gladwell was one of my dearest friends and one of the most impressive people I've ever known. In our family we call him Not That You're Not Dad Malcolm, because whenever Malcolm comes over for dinner the kids afterwards say, "Malcolm is just the best storyteller, not that you're not dad." And "Malcolm explains things so vividly, not that you don't dad." So we call him Not That You Don't Dad Malcolm.

Not That You Don't Dad Malcolm came over once and he was talking about this, and Luke came to my office in the back of our apartment the next day and said, "Dad, do you really believe this 10,000 hours thing of Malcolm's?" And I said, "You know, I love Malcolm like a brother, but he probably kind of rounds it off a little bit." So Luke said, "So, when did you start writing seriously?" And I said, "Well, when your mom and I came to New York I started really writing seriously." He said, "Well how many hours a day? How much a week did you take off?" And we did the calculation and he said, "Dad, if you're right, your 10,000 hours were up in May of 1986. You started in September of 1980, it's when you did." And I laughed, because May of 1986 was when my first piece was published in the New Yorker. That was when I did it.

So I called up Malcolm and I said, "You son of a bitch, how did you get that? How do you know that?" And he laughed and he said, "It's easy. The trick is that we're not used to counting in hours. 10,000 is six years, right? That's six years of work." And if you think about it at all, every professional program you ever entertained in life is a six-year program. From the moment you walk into the door of medical school until the moment when you're actually laying hands on a

patient is about six years of work. Every PhD program I've every heard of, even though it's supposed to be four years ends up being six years before somebody gets their thesis in and gets the degree.

We just don't think about it as six years of work. But the same thing is true about mastering or beginning to master the craft of writing to the level where it can get published professionally. So I think Malcolm is absolutely right about that, give or take 2,000 hours. There are always those kind of inner rewards systems as well, where you say, the Beatles were 10,000 hours better when they left Hamburg than when they arrived in Hamburg, but they were still John Lennon and Paul McCartney. They weren't you and me, right? They had positive feedback coming at them all the time. We don't know anything about the Liverpool band that arrived in Hamburg, got booed and hissed off the stage and went back and they all became stevedores and assembly line workers.

But I think generally speaking it's true. I always tell my assistants that, too, that if you make a six-year commitment to the art of writing or to the craft of writing there will be a place for you somewhere in the literary world. I don't know exactly where it will be, but I know that there will be one. The trick about it is, is that at our end, your and my end of life, six years seems like nothing, right? Things that happened six years could just as well happened yesterday as far as I'm concerned. When someone's 22 and you say, "It's going to take you six years to do that" it's like a lifetime. Who's got six years to waste on mastering that?

I think that account of it, in all seriousness, actually goes along. What you spend six years doing is learning all of these sub routines. In my last book, "At the Stranger's Gate", I talked a lot about what I had to learn, the skill, the mastery I had to arrive at to begin to become a good writer, not a graduate student was to substitute and for but, to learn to write connectively with all of the inclusion and pluralism that's built into the linear sentences governed by and, and to give up the contentious nature of academic writing which is all built around the objections of buts and yets. That was my task. It's a hard one to do, to learn to write critical prose that's built around ands rather than built around buts. It took me six years to begin to learn to do it and I still have not completed my own immersion in that kind of mastery.

I see that our time's up. Thank you so much for coming. Thank you for your questions.

PART 3 OF 3 ENDS [00:56:05]