Mark Gonnerman:  Good evening, and welcome to the Aurora Forum at Stanford University.  I’m Mark Gonnerman, the Forum’s director.  It’s wonderful to be here.  It’s certainly a thrill to produce and present “The Beatles on the Brain.”  It was forty years ago today that Paul and Ringo joined George and John in Rishikesh, India, while on their way to producing *The White Album*, and tonight we’re very fortunate to be here with three Stanford-educated scholars who have devoted their time and energy to understanding the human experience of the divine, I mean the human experience of music.  Daniel Levitin holds the Bell Chair in Psychology at McGill University in Montreal and is the author of *This is Your Brain On Music*, the best-selling book.  Nick Bromell is a professor of English at the University of Massachusetts-Amherst, and is the author of *Tomorrow Never Knows: Rock and Psychedelics in the 1960s* from The University of Chicago Press.  Our moderator tonight, Jonathan Berger, is a Stanford professor of music, a noted composer, and co-director of the Stanford Initiative on Creativity and the Arts.

Tonight we especially want to welcome the Stanford parents who are here with their progeny at the start of Stanford Parents Weekend, and we invite everyone to visit the Aurora Forum Web site, auroraforum.org.

Tonight, we’ll follow our typical Aurora Forum format, that is, we’ll have about forty-five minutes of on-stage conversation followed by another forty-five minutes of audience questions.  Now, everybody here tonight has a great Beatles story to tell, but this is not the occasion for that.  [Laughter]  So when you think about your very to-the-point question, line up behind one of the two aisle mikes and our moderator will recognize you.

Tonight’s program is being recorded for later broadcast on KQED Public Radio, and so for that and other reasons, we ask that you turn off your cell phones.

The Aurora Forum, co-sponsored by Stanford’s Office of Public Affairs and Stanford Continuing Studies, joins tonight with the Stanford Humanities Center to present this conversation.  I love working with the Stanford Humanities Center, for the scholars there believe, as do I, that the knowledge that is the fruit of inquiry into human history and experience enhances our appreciation for each other and our understanding of the arts and ideas that challenge us to flourish as individuals and to flourish as one of many species on
this beautiful planet, so I thank the Stanford Humanities Center for joining with us tonight. You’re such a lovely audience.

Thank you for joining us, and please join me in welcoming our guests to the Aurora Forum stage. [Applause]

Jonathan Berger: Thank you, Mark, and good evening. I have a whole page of Beatles song innuendos, but Mark used them all, so I’m going to go beyond them. Let me start things off with a true story. This week, I went to Rasputin Records to replace my lost *White Album*. When I went to the cashier, the cashier was somewhere borderline twenty-something, fully tattooed, pierced in places that were unimaginable, and he took *The White Album* and he said, “Best music ever.” And so, of course, because I was gearing up for tonight, I turned it into an interview and I said, “Why is it the best music ever?” He said, “Well, they were revolutionaries. They used distortion in noise. That’s clearly what’s important to this esthetic.” So I said, “But why is it the greatest music ever? Will it continue to be the greatest music ever? It was forty years ago, and it’s still the greatest music. Will it be the greatest music in two hundred years?” And without flinching, he looked and he said, “Man, don’t worry. There won’t be anyone in two hundred years.” [Laughter]

So we’re going to spend this evening thinking about longevity and ponder the question of if and why this music has become standard repertoire today, but will it remain in the standard repertoire? And I think what’s fascinating about our guests is that Dan has suggested either between the lines or actually outside of his book in the column he recently wrote for the *Washington Post* that the Beatles music will become the anonymous folk tunes – the ballads – of the future generations. No one will think of them as Beatles songs; they’ll just be the kids’ songs that are grown up with. And Nick’s perspective is entirely different. It’s the sense that (correct me if I’m wrong) the music is inseparable from the cultural context. And so we have a package versus something about the music itself devoid of any context. I’d like to start with that.

Because this is the fortieth anniversary of *The White Album*, I asked Nick and Dan, and I took the liberty of choosing my examples, to think about two songs in *The White Album* that are salient for some reason, and that will start us off. Nick, what are your two songs?

Nick Bromell: Well, my two songs are “Glass Onion” and “Yer Blues,” and I thought we would listen to one and then talk about that a bit, and then maybe we could listen to one of Dan’s songs. We don’t have to listen to them both in a row. But let me say a couple of words here to sort of explain why I think “Glass Onion” is a good song to talk about. Obviously, *The White Album* is just a gigantic, overwhelmingly huge work of popular music. It was when it arrived on the scene. Those of you who were there and can remember (although Dylan said famously that anyone who claims to remember the sixties wasn’t there) [Laughter] … if you can remember this, you will remember that *The White Album*’s doubleness was just an overwhelming fact. How could the Beatles be so generous and so creative as to come up with a double album? They were at the very height of their powers, and it seems as much a privilege now to be reflecting on what the album means to us today as it was to be listening to it then and figuring out what it meant then. So that’s what I want to tunnel in on for a moment: the very special relationship
that the Beatles had with their audience by the time this album came out in December of 1968. The relationship, paradoxically, could be described as intimate even though the Beatles were untouchable and celebrities of a magnitude that no one had ever seen before. They nevertheless created an audience that had a sense of really being intimate with them, and that goes way back to their early songs when people started hearing the “you” being addressed in those early love songs as also meaning the audience listening. So by the time we get to *The White Album*, the Beatles have come to represent something for their audience that is really extraordinary, and that is: people are turning to the Beatles to sort of find out what it all means. What is the meaning of this turbulent era that we’re living through? What’s the meaning of my own life? And I know this wasn’t just me because I did do some research in looking at underground newspapers from the period, and this theme kept coming up. So we turned to *The White Album* looking for answers to lots of questions, and what did we encounter? Well, first we encountered this album that was just blank; there was nothing on it, and the Beatles were toying with us, playing with us. Many of you know, but some of you might not know, that the album was not called *The White Album*. It came out without any name. Who named *The White Album* was the audience. It was just a kind of spontaneous name that welled up from the audience who called this *The White Album*. So we turn to *The White Album* looking for this kind of meaning and hear all these very, very, very strange sounds and noises – a very, very fragmented musical world. I hope Dan will talk about that more – the way our brains might have been taking in that music. And we hear in “Glass Onion” the Beatles directly and explicitly speaking to this relationship that they have with us into our sense that we might find meaning in this work of theirs. They both recognize it but they kind of mock it, and so the words here, to remind you before you listen to the song, are:

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I told you about Strawberry Fields,
You know the place where nothing is real.
Well, here’s another place you can go
Where everything flows…
Listen to me…
Fixing a hole in the ocean.
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And then the other famous lyric is:

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Well here’s another clue for you all,
The walrus was Paul.
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I think I’ll stop there and we’ll listen to the song for a while and then we can talk about it.

*A portion of “Glass Onion” is played.*

It’s almost sacrilegious to cut it off [Laughter] but I guess we’ll have to do that.

**Daniel Levitin:** We music teachers do it all the time. [Laughter]

**Bromell:** Oh, you do it. All right.

**Levitin:** Just so long as you’re taking responsibility.

**Bromell:** Yeah, exactly. Don’t blame us, OK? It’s him.
Berger: We also have to be cognizant of fair use of time.

Bromell: OK. So I’m just going to raise a couple of questions and then I hope that maybe Dan and Jonathan can talk about them, too. And then maybe later when you all ask questions we can take these up again. A moment ago, Jonathan said, in trying to set up this conversation, that I feel that to listen to the Beatles and to really get *The White Album*, you have to recover the historical context, you have to go back to the sixties, and I agree with that. However, I also believe that the sixties aren’t over. And I mean that in a very realistic sense. And I think right now … the presidential primaries that we’re going through right now, just to choose one example, is a forty-year anniversary here, all right? We’re experiencing that. But the sixties are here also in the sense that that’s what the culture wars are all about. The sixties are the schism in American history that has not yet healed, and maybe never will heal. So when the Beatles address us with the possibility that I’m hearing that when they’re mocking our turn to them for meaning and give us this very long and disjointed, chaotic, eclectic album, one possibility is that they are inducting their audience of eighteen-year-olds at the time, in my case, into the world that we know now – a world we’ve since come to call post-modern – a world in which there are no grand narratives that hold everything together and in which everything has fallen apart. And we have to try to put together as best we can the meaning that there might be in life. So I’ll just put it out there in that way, and that leads to some questions about history: whether we still are, essentially, in the same moment as we were in the sixties. Maybe we will be for another two hundred years. But it also leads to some questions about esthetics and the post-modern. Jonathan is a composer, Dan is a musician and intimately familiar with the history of music, so I’m kind of curious about what you think about these questions. Is it fair to put you on the spot here?

Levitin: I guess that my first reaction as a cognitive neuroscientist’s perspective on what *The White Album* represents is that it represents an effort by the Beatles to expand our notion of what the category of Beatles music means. And I think one of the things that’s most salient to me about the Beatles…. Somebody asked me recently – an undergraduate who had never really heard the Beatles – to name a single great Beatles song. And I started thinking about it and I realized that’s the wrong question because there are great Beatles songs, but what made the Beatles great wasn’t a single song. It’s that the width or the breadth or the sheer size of the space that encompasses Beatles songs: everything from “I Want to Hold Your Hand” to “Glass Onion” or “I Want You (She’s So Heavy)” to “Rocky Raccoon,” there’s just such an enormous…. You know, in cognitive neuroscience, we talk about how categories are formed in the brain, and you think about the category of birds. Birds have all these things in common with one another. Generally, they tend to have wings and they tend to fly and they tend to sing. There are a few exceptions like ostriches and penguins, but for the most part, you’ve got a pretty well-defined category. And if you look at music, you’ve got groups like … we were talking about Santana before this get-together, and I love Santana, but there’s a sense in which many Santana records fit inside a space that’s very easy to define. The same with the Rolling Stones in the sixties; there’s a Rolling Stones sound. But the Beatles were constantly pushing at this notion of what the boundaries of the space were, and I think that’s an interesting thing from a psychological respect.
Berger: Although from a musical point of view – and this is something we were talking about before – if you take the six or seven years of productivity of the Beatles, which is remarkable to think about, there’s not a linear stylistic development. We know the early Beatles songs are a little rougher. There’s a greater sophistication. There is, indeed, a sort of postmodernism of *The White Album*. But one can’t necessarily take a song and place it stylistically in a continuum like early or late Beethoven, for example. So it’s not entirely clear to me that…

Levitin: You know, an interesting proof of that is that you can take recordings like “One After 909,” which sounds perfectly contemporary with April of 1970 when it was released, but they actually wrote it in 1962, and you can’t tell.

Berger: Do you want to pick a song?

Levitin: Well, the first song that I brought is a demo for “Back in the U.S.S.R.” For those of you who don’t know how the process works in the studio, typically musicians record a version of their song very quick and fast just to sort of get some ideas down on tape. And in this case, Paul has recorded “Back in the U.S.S.R.” for the other Beatles. He’s presenting it to them to evaluate for possible inclusion on the album. He wants to get their reaction. He’s done a little bit of production. He’s played the guitar part twice and he’s sung it twice, double-tracking it. What I find so much remarkable about the demo, for one thing, is this sort of humbling experience that even Paul McCartney had to go through at that point of auditioning a song to the group and to the producer. But apart from that, there’s so much here. You’ll hear that the musicianship isn’t actually that good. He can barely play guitar on this. When you hear him playing live in a moment, you’ll hear that he’s just not very good. [Laughter] And on record, on *The White Album*, or on anything that you heard him record, he sounds great. But when you look through Mark Lewisohn’s book for how much time they spent actually recording guitar parts, you realize that in many cases they were recording a measure at a time and stitching it together because their ideas about the music so far exceeded their technical ability as musicians. And I think that’s where the great expression comes in *any* art form. You listen to Coltrane, and it sounds like he’s battling against the limitations of the instrument. You look at Van Gogh, and it seems like his ideas are so much larger than he can get out with canvas and paint and knife and brush. The ideas are so much larger than the physical medium that they have to be sent through, and here’s a perfect case of it. Paul had these great ideas and with the studio as an aide, he was able to get them out. And another thing that I think is just remarkable here is that the song as you’ll hear it as an acoustic guitar demo stripped down: it’s a good song. They could have left it alone, but what the Beatles did, uniquely I think among all musical groups is that they had so many musical ideas that they just threw them in. In a single song like “Back in the U.S.S.R.” in its produced version, there’s enough material to have written…. Any other band would have been stingy and made five songs out of it, right? But the Beatles had so much musical creativity coming in, they could afford to put five songs’ worth of musical ideas and counterpoint and guitar licks and contrapuntal lines that they could put it all into one song. They didn’t care. There would be more ideas tomorrow for other songs. Elvis Costello once said about songs on *The White Album* exactly that: that any one of them, any other song writer, would have taken the musical ideas and made five songs instead of one. So here’s the demo for “Back in the U.S.S.R.”
A portion of “Back in the U.S.S.R.” demo is played, followed by a portion of the released version of the same song.

You could build a whole song just around this little thing. Here’s the beginning. That lead guitar line kills me.

**Bromell:** Fabulous.

**Levitin:** They wanted to hear the Beach Boys part. [Laughter]

**Bromell:** You know, my first response to this … I need to back up a little bit and kind of address the whole question of serious academics, and we are serious academics, believe it or not, [Laughter] directing our attention to something like this. And when I teach this kind of material, I don’t want to over-generalize, but a certain kind of student is drawn to courses about the sixties, and [Laughter] I’m kind of working against that a lot of the time. There’s a lot of “Aren’t you over-analyzing that?” and I try to say, “You know, you really can’t over-analyze it; that’s the whole point.” It’s just bottomless. But in regard to this whole matter of how much of what the Beatles did they did in the studio, and a lot of times people say pejoratively, “Oh, you know, they weren’t really good musicians; they did everything in the studio.” To me, one of the really interesting ways of looking at that … now here’s where we go over the academic deep end, maybe … is in relation to human hopes for technology. In many ways, technology is the great enemy, yet of course it’s making our lives easier all the time and it’s extending our lives, but it’s also doing a lot of bad things in the world. You may know that Martin Heidegger wrote this interesting essay called “The Question Concerning Technology,” and he really puts it as a question: Will humans manage to turn their instrumental reason and the powers of technology ultimately in a direction that will sustain life on earth, or not? In an interesting way, I think the electric guitar alone, but then beyond that, the way the Beatles committed themselves to what technology might do musically is reason for hope. And I think it’s one of the many reasons why we found their music to be so full of hope and it still continues to give very much encouragement. So that’s just one of my first responses to hearing this.

**Berger:** Another angle on this is I’ve always had this theory that Bach sounds great. The music of Bach has integrity such that if it’s played on a kazoo, the music will come across. And the proof of that is… My period of technology was transistor radios, so I grew up with sometimes two transistor radios, one on each ear, so that I could listen to ABC and MCA at the same time. But were I to hear Bach (I didn’t at the time), but were I to hear Bach over a transistor radio, it would still have its great integrity. Now, the Beatles songs I did grow up hearing on worse than transistor radios. I only had a mono phonograph. I was saying before that the first time I heard *The White Album* in stereo, I was already teaching at Yale. It was many, many years afterwards, and it was an unbelievable shock. [Laughter] But there was something about the integrity of the music. The music stands on its own beyond the technological limitations.

**Levitin:** I think that from a technical standpoint, what my colleagues who are record producers and engineers talk about a lot is the quality of the mixing of Beatles albums that seems to stand above most other records, and that is that even on a transistor radio, even it you’re in a supermarket and you’re in the produce aisle and one of the stereo
speakers is here and the other stereo speaker is way the heck over in the meat department, and you’re only hearing the one, or you’re hearing it through a speaker this big or through a great system, all these central parts come through. You hear the vocal, you hear the drums, you hear the important guitar stuff. Even on those weird albums where the stereo is split, the essential stuff is there in one channel most of the time, and that’s a very difficult thing to do from an engineering perspective. Their engineers were among the best engineers in the world: Geoff Emerick and Glynn Johns and Hurricane Smith and the rest of them were in a sense creative partners in this enterprise of being able to present the music in a way that it would translate no matter where you listened to it.

**Berger:** One thing that strikes me is that because of the compression of time that this all transpired in – we are really talking about six years – the not enormously great difference between our respective ages puts us in very different perspectives of seeing this music. We were saying before that you were in college and I was in high school when *The White Album* came out, and he was doing finger painting. [Laughter]

**Levitin:** I’m the baby of the group.

**Bromell:** I was a child prodigy. [Laughter] I was only four.

**Berger:** I was left behind. But for me, the appearance of *The White Album* was a huge problem politically. I equate *The White Album* with the massacre at My Lai, and I felt that it was just going against everything that needed to happen with music. Music had to have meaning, and that meaning had to be direct, sort of in the vein of Kurt Weill and Hans Eisler and these composers who sort of left their trains so that they were devoted to presenting a message. The Beatles were just going in the other direction. And it’s interesting that you find sort of political catharsis in the fact that it was about postmodernism … it was a decollage.

**Bromell:** Well, yeah, now you’ve opened the door to this endless question of what politics is, what the relation of the politics to the personal is. That leads to the whole question of what was the relationship between the counterculture and the New Left. It goes on and on, and it’s very difficult to really try to address that responsibly here. But just briefly, to take an example of a very, very political song…. Remember that way back, four years earlier, when John Lennon is asked at the Idlewild Airport if any of their new songs were going to be anti-war songs (this was around 1965), he replies, without missing a beat, “*All* our songs are anti-war songs.” And there is definitely a sense in which that’s true, but beyond that, I would say that if you take a song like “Happiness Is a Warm Gun,” it’s clearly a very, very political song, and a satire on American fetishization of the gun. And also “Bungalow Bill” is this wonderful kind of combination of American manifest destiny, myth of the cowboy West, but also…

**Levitin:** Dovetailing with “Rocky Raccoon”…

**Bromell:** … dovetailing with all that, yeah. So, you know, here’s the whole question of how much of what we hear is what we bring and project. And not to cast a pall on this wonderful evening, but you can’t talk about *The White Album* in this connection without mentioning the fact that it was from *The White Album* that Charlie Manson got all of his crazy ideas about the meaning of the sixties and the meaning of his family and so on and so forth.
**Berger:** We were warned that time would fly very quickly and we haven’t even gotten to our second pieces, so let’s go into some more music.

**Bromell:** OK. Well, the second song that I thought we might want to hear is “Yer Blues,” and I had a couple of reasons for wanting to hear that. One is that … now I’m looking out here and I don’t think this is going to be true of this audience, but many audiences, when they think about the sixties, they’re tending to think about: Yeah, everything was great, everyone was happy, it was all about flowers and sunshine and love and all of those things. And it’s very important for people to remember that that’s not the case. There was a lot of just existential dread, anxiety, terror, depression. The year 1968, over the course of these nine months, you go from all of the hope being generated by the “Clean for Gene” movement and Bobby Kennedy tossing his hat in the ring and then the assassination of Martin Luther King and of Robert Kennedy, you have the uprisings in Prague and in the Sorbonne in Paris, you have the Chicago Seven in ’68. It goes on and on the on. The Tet Offensive. I don’t need to tell you all the events that made the period feel crushingly heavy. So those feelings are also, I think, given musical expression very powerfully on this album.

**Levitin:** If I could interject, for people our age, also – men – there was the threat of being drafted, and by ’68, I think all of us knew people from our neighborhoods who were coming home dead. The draft only ended four months before my seventeenth birthday, so the two of you must have been even more on the hook for that. And the other thing that was going on was that the cold war was so fresh in everybody’s minds. When I was in school, we used to have these drills where we would hide under our desks: this “duck and cover” air raid thing. So as eight- and nine-year-olds, we were taught to fear that we could be annihilated at any minute.

**Bromell:** Well, in connection with what you just said, coincidentally, just before coming over here, I thought, Oh, it would be really interesting to find out what happened on February 21, 1968 – exactly forty years ago. And unfortunately I couldn’t find out anything about that particular date, but on February 18, 1968, the Pentagon announced that in that preceding week (from February 11 to 18), the U.S. had the highest casualty toll in Vietnam so far of the war. And I’ll just tell you what the figures were to remind you or to tell some of you for the first time to give you a sense of the scale of things here. In that one week, 543 were killed and 2,547 were wounded. So that’s just one fact among many to bring to the listening of the album and how it was heard in 1968. So let’s hear a little more of it.

[A portion of “Yer Blues” is played.]

Two quick points I wanted to make about this song. One is the blues. This is obviously a blues-based song. It does have a bridge in there, but it’s very much a blues-based song, and the lyrics are explicitly calling on the blues tradition. Now, rock and roll historians have made very, very clear and very, very true that rock and roll is to a very large degree an act of theft and appropriation on the part of both white musicians, studios, and the audience of black American music. And it was in the sense that it was an appropriation that could not have happened had there not been a fact of racism and of power disequilibrium. So the word “theft” only begins to get at it because it’s like systematized theft that’s institutionally legitimated. That said, to me the one limitation with ending our
thinking about the blues and rock and roll there is that it doesn’t do justice to something else, which is: What did white musicians and audiences hear in the blues sound that spoke to them in their historical condition? It did what we would now call sort of cultural work for them. Yes, they were drawn to a sort of stereotyped idea – a cartoon of black resistance to white middle-class culture and making a hero out of a marginalized figure, yes. But I think that there’s also something very powerful in the blues form that blues musicians had crafted and discovered and that made that form so powerful for the original blues audience that it could work in different ways for young white kids going through the turbulent period of the sixties. That’s one reason why I think that song is very interesting. And another – and I’ll only touch on this very briefly – is the word “lonely” and how important that word is as one of the key sixties words. Obviously … not obviously, but many of you might think and realize that “I’m lonely, gonna die” goes right back to “Heartbreak Hotel” by Elvis Presley: “I am so lonely, I am so lonely, I am so lonely I could die.” Obviously, Lennon is upping it. It’s going from the conditional tense to the future: I am going to die. And so the condition of loneliness is the specific condition that the blues form is helping this very, very privileged white audience work through.

Berger: I want very much for Dan to play one extraordinary cut, so I’m going to skip over the two, but I’ll mention the two that I chose were for me the polar extremes of The White Album. It’s the song, “I Will,” and I will play just twenty seconds of it. The other side is “Helter Skelter.” For me, this disparity has to do with music and diatonicism particularly and noise and dissonance particularly. And this is a discussion in itself. Before we turn to Dan, I won’t play “Helter Skelter,” but let me play the beginning of “I Will.”

[A portion of “I Will” is played.]

So, it is the perfect tune. But if you start counting while you’re tapping your feet, you’ll notice that there’s a measure short in the first phrase. It’s a seven-bar phrase rather than an eight-bar phrase. This is a technique that Haydn loved, Schubert would occasionally do it, and it’s very clear to me that the Beatles devoured everything that Haydn wrote and picked up on it. [Laughter]

Bromell: He was the fifth Beatle. [Laughter]

Berger: I won’t play you Haydn, but I’ll play you a short opening of a slow movement of a Schubert sonata that does the same thing.

[A portion of a Schubert sonata is played.]

It comes in one measure too early. It’s exactly what happens in the opening of “I Will.” So let’s turn to “While My Guitar Gently Weeps.”

Levitin: I chose this because I find again the theme of how much music they had in them – that they could stuff into one produced version of a song. I think that the released version of the produced version on the album “While My Guitar Gently Weeps” is an extraordinary piece of work. You all know it. You’re here; I guess you’re fans. So you know that it’s Eric Clapton playing the guitar solo. A gorgeous production; big
production. But the demo for the song is a completely different song, and if you’ll indulge me, I’d like to share it with you. This is George Harrison on guitar and voice.

[A portion of a “While My Guitar Gently Weeps” demo is played.]

Berger: That’s really beautiful.

Levitin: To me, that version is so hauntingly beautiful and so delicate and so sad. The depth of the emotion that’s there and the intimacy of that recording, to me, it’s breathtaking; it’s heart-stopping. That is the way George imagined the song. And I find it deeply tragic that being a member of this big band meant that he can’t always do things the way he wants. Bands have politics and bands have a style, and I’m inventing this in my own mind because I don’t really know – I haven’t seen any documentation of it – but knowing a bit how record companies work (Jonathan and I both worked for Columbia; it was a big company that has its way of doing things, as EMI did), I can just so easily imagine that George Martin and the Beatles said, “Great song. Here’s what we’re going to do to it, baby. We’re going to add all this stuff to it and it’s going to be great and it’s going to be big.” And I can just see the tears rolling down George’s cheeks from this beautiful thing that he had created. And, of course, what it became is great, too, but it’s not the same thing. And I think that being in the Beatles meant that as intimate as they had become on songs like “Julia” and “I Will,” and “Blackbird,” this was too much. This was just too much emotion – too raw and too in your face – for a Beatles record.

[A portion of the released version of “While My Guitar Gently Weeps” is played.]

I’m not saying there’s anything wrong with this [Laughter]. This is one of my favorite songs and I think it’s one of the best-produced records ever, but it’s just … they’re different things.

Berger: We’re at a point now where we’re supposed to turn this over to questions, and there are innumerable…. There’s a whole list of questions that I have and expected to get to, so I hope someone will ask about noise. [Laughter] I’ll feed you questions. One of the things that I felt would be interesting would be…. The Beatles for me…. There’s a phenomenon in psychology called flashbulb memory. A common case is the assassination of John Kennedy. People of my generation remember everything about the moment we heard about it, and I remember the music that was playing and I remember the smell of the kitchen. And the Beatles seemed to elicit flashbulb memories of numerous kinds. I thought it would be interesting to gather some of those. So someone can ask that question if you want [Laughter] but you are, of course, free to ask any question you like.

Question: Can you talk about their decision to stop touring and just to record in the studio?

Levitin: Well, I think this is pretty well documented that they reached a point where concerts were a kind of grueling ordeal, and there was so much screaming going on that they felt that neither they nor the audience could really hear what they were doing, and they found that frustrating. It was that, combined with technological advances, that made the studio more interesting, with studio effects and multi-tracking, and the studio became a kind of musical instrument for them, and I think that those forces together brought them
to an artistic point where they wanted to just be able to make their records and have them heard the way they intended them to be heard and not drowned out by screaming.

**Berger:** One of my flashbulb memory moments for the Beatles was in 1965 when I was coming back on a bus from a summer camp. We were going by Shea Stadium and it was the night of the Beatles’ concert. And literally from miles away, the sound of screaming was just unimaginable. I can’t imagine how anyone could play a concert under those conditions.

**Bromell:** Just out of curiosity, how many people in the room here ever saw the Beatles live? Wow!

**Levitin:** So I think they certainly would have made a lot of money if they had continued to tour, and I think it says something about their artistic integrity that they decided not to.

**Question:** One thing I’d love for you to address that you haven’t talked about yet is the question of *The White Album* as an end of something, which is to say, as you know, each of these guys was working in his own separate room on a lot of this and it was one of the ends of the collaborative period. George Martin, the producer, thought that *The White Album* was incredibly self-indulgent and wanted it to be one record and not two. How do you reconcile that with the end result that you see?

**Bromell:** Well, you know, that’s a great question and it points to the difference between the way the Beatles were heard and what they were actually experiencing in some ways. Dan mentioned Geoff Emerick, this great engineer. He actually quit at that point, and Ringo seriously left the band and they had to go and beg him to come back because they were falling apart at the time.

**Levitin:** Paul plays drums on “Back in the U.S.S.R.” and a few other songs.

**Bromell:** Yeah. But one way to reconcile this is to say that the sort of centrifugal flying apart—the dimensions or energies that you hear in *The White Album*—on the one hand produced this kind of aural sonic range that’s extraordinary in it and also produced an emotive range. You know, there’s an enormous emotive range from “Helter Skelter” to “Julia,” or whatever. That didn’t just come from four brainy people sitting around saying, “How can we come up with these different tunes that express these different things?” It’s coming out of the recording studio when they are literally flying apart and yet there’s still a bond that’s holding them together, and so on and so forth.

**Question (continued):** As they were falling apart, who was the architect who was holding it together, and how much of an impact did George Martin have on their sound and on their legacy?

**Levitin:** I think at the time of *The White Album*, with George Martin coming in and out and Emerick leaving in the middle, by that time, there was a group of engineers at the Abbey Road Studios who…. Emerick wasn’t the only engineer there; there was a group of engineers who knew how to get certain Beatles-like sounds, which microphones to use. The Beatles were becoming more studio savvy in knowing how to produce themselves. There was a guy named Chris Thomas who had come in as an intern and Martin went off on vacation and left Chris in charge. Chris became the producer of Pink Floyd’s *Dark Side of the Moon* and the first two albums by the Pretenders and a bunch of
albums by Elton John. That was his trial by fire producing some of the Beatles’ sessions. But I think Paul is generally regarded as the architect of the vision and the one who was trying to rally the others to do their thing. You can see in the movie *Let It Be* that the others find it really irritating that he’s scolding them and trying to play a combination cheerleader, coach, and teacher. He’s not the oldest member of the group. He’s a year and a half or two younger than John, and I think there was a lot of resentment about that. And I think in fact, although Paul tried to hold things together, he didn’t manage to do it.

**Bromell:** And, you know, just to comment a little bit more about this, I don’t know if you’re aware of Mark Lewisohn’s wonderful book about the Beatles. He went back and looked at all their studio logs: how much time did they spend on this and that. And the amount of time that the Beatles spent working on *The White Album* is just mind boggling. It wasn’t as though they’d just dash in and dash out and then George Martin would have to come in and deal with the mess. So "Ob-La-Di, Ob-La-Da" took fifty-seven hours. They were in the studio working on that song for fifty-seven hours. So clearly they were fully engaged artistically in some way in the process. Whether they were working well as a team or not is another question.

**Levitin:** But they certainly knew how to make records by then.

**Berger:** There are also numerous cases in the history of music where antagonism amongst a team (Gilbert and Sullivan being one) produces a much more vibrant and coherent esthetic result.

**Question:** Our Beatles experience is an amazing confluence of music, history, culture, and all the personal experiences we were going through. I was one of the ones who raised his hand. I saw the Beatles in ’66 in Memphis, and it happened to be a couple of days after this whole issue of Lennon’s comment about being greater than Jesus. And, in fact, on the other side of town, people were burning Beatles albums. Sort of interesting timing. The comment I wanted to make: I’ve read a couple of different interviews where both John and Paul are amazed at all the analysis that has been done on Beatles songs. It’s sort of a reflection of running Beatles records backwards to find out if Paul was dead. Amazing. People were looking so hard to find meaning in these songs. And they’d say, “We’re just four guys writing music.” An interesting recollection is how the beautiful song “Yesterday” came about. Paul woke up and said “Scrambled eggs.” And somehow “Scrambled eggs, I love your legs” turned into “Yesterday.” It’s just amazing how the simplicity of that time exploded into such a meaningful cultural experience for us all. I loved the Beatles and will always love the Beatles, and it’s wonderful that you are here to help us understand this in a deeper way.

**Berger:** You know that Paul reportedly agonized after writing “Yesterday” because he was absolutely convinced that he didn’t write it. It was a case of subconscious plagiarism: that someone must have written it; it was just too good to be true.

**Bromell:** Haydn, I think it was. [Laughter]

**Berger:** It is, in fact, a seven-bar phrase.

**Levitin:** Well, to address one of the things you said, I think in fact they were surprised by all the analysis. But of course the job of any performer is to communicate with the
audience and to make them feel that they have a connection to the performer. Whether it’s a stand-up comedian or an actor or a musician, that is their job, and the Beatles did it well.

Berger: It goes back to “Glass Onion,” which is all this self-referential “What are people thinking?” and it’s sort of mocking this.

Question: I wonder if in some ways we might be misremembering or incompletely remembering the popular culture or the popular music of the period. It seems that the Beatles seem to be one of the few phenomena that we remember fairly accurately. I’m thinking that there was a lot of folk music, popular standards, show tunes, that were quite prominent during the period that are kind of incompletely or not really remembered anymore. It seems that the Beatles is one of the few phenomena that we’re kind of remembering the way it really was. I was wondering if you might be able to comment on that.

Berger: Well, I agree with you. Again, for me the Beatles were … I’ll probably have things thrown at me here, but… the Beatles were not the prominent music makers of the time for me. For me, it was, in fact, folk music. It was the music of protest. There was a transformation. Those of you who grew up on the East Coast will remember the transformation from ABC and MCA on the AM dial to Pacifica Radio (WBAI). That, for me, was a very important transformation. You would never hear the Beatles on Pacifica Radio, though I do agree with you. But we’re here; it’s about the Beatles. [Laughter]

Question: You mentioned the influences of the blues on The White Album and some of the conflicts that came up between different people of different races, and I was just wondering if you could expand upon that considering that it was such a racially and politically charged era.

Bromell: Well, do we know that that’s what the song was about? Do you think so?

Levitin: Yes, Paul said so. Paul said in an interview that “Blackbird” was a song about the rising up of black Americans: “You have to take these broken wings and learn to fly.” It was a metaphor for racial equality:

Blackbird, singing in the dead of night  
Take these broken wings and learn to fly  
All your life  
You’ve been waiting for this moment to arise.

They were conscious of what was going on and they were addressing it in a metaphor, which is, of course, what art aspires to do. I think it’s to use metaphors to convey larger truths.

Bromell: I’m not sure if any of this will answer your very interesting and open-ended question, but one aspect of this moment in time, the late sixties, that is often forgotten is that just as I mentioned going from the Summer of Love in 1967 – Sgt. Pepper’s, and then you get The White Album in a very, very different kind of mood – well, another one of the big mood shifts in the sixties, especially for young people, and I can only speak, obviously, for young white people that there had been this moment, in some ways represented by the civil rights movement and by Martin Luther King when a possibility
of some kind of cross-racial (we’re talking white-black only here) rapprochement became palpable, like visible. There was a possibility of this. And for very good and understandable reasons historically, that dream disappeared. It ended very abruptly. It came to a crashing end. And I think, in my case, anyway, and I think on that of other white people I knew, it was very, very sad … a very, very difficult thing to accommodate ourselves to, although you heard what was going on and you understood it. But it was difficult. So I think maybe some of that sense of disappointment is also being voiced in this album along with a lot of other late sixties music as well.

Question: Two things: One question, and then I have one other. Where in the world did you get those beautiful demos, and where can we get them? [Laughter]

Levitin: “While My Guitar Gently Weeps” is available on the Beatles anthology, volume three. A long time ago, a friend of mine at Capitol Records gave me *The White Album* in demo form, every single song, in order, if I promised not to play them for anybody. [Laughter] So this is going to have to be our little secret.

Question (continued): One other thing. Not too long ago, I saw a documentary called *The FBI vs. John Lennon* [sic, *The U.S. vs. John Lennon*] and I was really surprised to see that he was such an effective political activist against the Vietnam War. Apparently the State Department was kind of terrified of him and they tried to keep him out of the country and they had a campaign of disinformation about him, and so on. There were some shots in that documentary about a huge gathering on the White House lawn.

Levitin: Nick has this great line in his book about how…. I don’t remember exactly how you put it, but *The White Album* came out and the war was still going on.

Bromell: Well, the whole dream was over. This is kind of tangential, but this goes back to the whole sense of an ending that’s beginning now with the Beatles breaking up and the sixties coming to an end on the calendar. You know, we’re approaching 1970. But in the post-Beatles period, John Lennon in his famous interviews in *Rolling Stone*, says of the sixties, “We all dressed up and nothing happened. The same bastards are in control. The dream is over.”

Levitin: Or, as David Crosby said, “Somebody wasn’t listening.”

Bromell: “Somebody wasn’t listening,” yeah. We all listened, but somebody wasn’t listening.

Questioner: I think that’s something that 10,000 people were chanting the song, “All we are saying is give peace a chance.” It was a stunning event.

Bromell: Yeah. Well, you know, if you look into the history of the sixties, you know, broadly speaking, one of the startling things is how many people were wiretapped and how many people were investigated and how many people were photographed, how many files there were. And, you know, it’s almost absurd. You look … some names have come out and these people who could never conceivably be a threat to the U.S. government were being watched and followed.

Levitin: Kind of like now.
Bromell: Kind of like now. Exactly. [Laughter, Applause]

Question: Professor Berger, as you mentioned before when you were talking about your experience at Rasputin Records, a lot of people considered *The White Album* and the Beatles, in general, to be very revolutionary, and they’re not the only ones in the decades around that time. But if you think about a lot of the music today, a lot of people would say you couldn’t necessarily think that – that it’s not on the same level. What do you three think about the future of music? Do you think that it’s going to come back to that? Do we have something to look forward to? [Laughter]

Berger: To that being a level of quality or a level of sound?

Audience: Both.

Berger: So let me twist your question a little bit. I think what was interesting about that comment was in fact the sense that what was outstanding for this person about *The White Album* was distortion and noise. [Laughter] I can see that. If you think about “Helter Skelter” and if you think about “Yer Blues,” there is an awful lot ... there’s a wall of sound. It is sometimes painful. In music, we have two distinctions: we have a distinction between musical consonance and dissonance and sensory consonance and dissonance. And musical consonance and dissonance is the control of sounds that sound good together and the careful control of sounds that sound a little bit off but then, in typical situations, will come together and resolve, and so we have this functional world. And I think that one of the things that happened in some of these pieces – and again, I brought the extreme of “I Will” and “Helter Skelter” because for me they are polar opposites. In the “Helter Skelter” world, there is not a lot of attention paid to controlled consonance and dissonance. This is dissonant music. And in fact it’s sensorially dissonant. Sensory dissonance is like scratching on a chalkboard. It’s a sound that in itself has an inherent unpleasantness. I think that a lot of pop music – I think the Beatles were in fact revolutionary, but they were not the only ones who did it – was sort of building a barricade, building a barbed-wire fence around an audience in which there were people within that audience who said, “This is our music.” And there were people outside (it was a generational thing, largely) who said, “This is unbearably dissonant.” And I think that this idea of the use of distortion and dissonance in an uncontrolled way is, in fact, what remained here. Now if your question is, “Will it go back to tunefulness as a balance?” sure it will.

Bromell: How many people here have heard of the *Grey Album*? Just a few. All right. You know, my answer to your question would be that there is great music now. There is great revolutionary music now. I think there may not be a single group the way the Beatles were, and there may never be again because there may never be a great author like Virginia Woolf or Hemingway, either. Things have changed, but as a musical form – as something happening in popular music – I think hip-hop is every bit as exciting and creative and revolutionary in the way that popular music can be, as sixties rock and roll was. Absolutely. We wanted to be able to play some of *The Grey Album* for those of you who are unaware of it, but most of you are not aware of it. Basically, it’s a hip-hop album where all the samples are taken, or most of them anyway, from *The White Album*. And it’s called *The Grey Album*; it’s like black and white, right? So it’s really a great album. I recommend it. But, of course, it’s not in the stores. It was only available for
twenty-four hours as an illegal download. But it’s widely disseminated. Most people have it, basically. I wanted to bring it but my son forgot to give me his copy. [Laughter] So that very idea of, OK, we’re going to flout copyright law and we’re going to produce this thing. We’re going to make it available free for twenty-four hours. Wow! What could be more artistically revolutionary than that?

**Berger:** Actually, if you’re here with your parents and you live on campus, close your ears and don’t listen to it, but it can be semi-legally downloaded if you Google “Grey Album,” but don’t do it from campus, please. [Laughter]

**Bromell:** Do it from home, all right?

**Question:** Do you ever lament that the Beatles never recorded a Dylan song?

**Bromell:** Wow. Not until this moment I haven’t. [Laughter]

**Levitin:** Well, they did. They did in that Lennon writing “You’ve Got to Hide Your Love Away” was trying to write a Dylan song as best he could. That’s what he said. And if you get the Lennon bootlegs, you can hear him doing his version of a Dylan song from “Serve Somebody.” Lennon does his own parody of “Serve Somebody.”

**Questioner:** Where is this?

**Levitin:** Lennon box set – the one that includes the demo recordings.

**Berger:** It’s interesting, by the way, to point out that the Beatles were free to skip between styles, to go acoustic, to go electric, whereas Dylan, the minute he crossed that line, he was a traitor to his prior audience, and he had to then redevelop a new audience. And there’s a very strange trajectory that he had. He suffered tremendously. Where the Beatles were just … if they wanted to do it, they could do it.

**Question:** You talked before about how the Beatles encompass a lot of different kinds of music. I wasn’t alive during the sixties, but…

**Berger:** Neither was Dan.

**Question (continued):** …when I first heard them, they didn’t sound like a band from the sixties. They just sounded like a band that I might hear on the radio or at any time. I was wondering how it is that they can encompass both different styles and different time periods that they could be in.

**Berger:** My other hero besides the Beatles as a unit is Igor Stravinsky. And if you listen to Igor Stravinsky’s music, Igor Stravinsky spanned almost a century of music, and he changed styles dramatically from one year to the next. He went from writing these enormous orchestral pieces to these very small, angular chamber pieces. And then his style went back two hundred years, and then he turned atonal. But no matter what you’re listening to – no matter what style he’s writing in – it’s always recognizable from one note as Stravinsky. I think that’s one of the characteristics of the Beatles, and it’s not only the quality of their voices but the quality of the production. There is some inherent “Beatle-ness” about anything they do. Dan did this interesting experiment of seeing how short it took for an audience…. Do you want to talk about that?
Levitin: Well, I have what I call the fifty-millisecond experiment. I play fifty milliseconds, or 500 milliseconds, but a tiny little piece of song – so short that there’s no melody because you’re playing less than one note. There’s no rhythm because, again, it’s less than one note. And if you play just a half-second of “Eleanor Rigby”– the first half-second – everybody in the room gets it. Even people who can’t say, “That’s ‘Eleanor Rigby’” say, “That’s the Beatles.” There’s something so instantly recognizable about that timbre, that tonal color, that package, that I think one of the reasons that they’re timeless is because they’ve had such influence that people have tried to sound like them ever since. So on the radio at any time since then, whether it was Billy Joel or Elton John or Amy Mann or Michael Penn or The Waterboys or The Grays or whoever it is, there are always people who are trying to take some of that and that’s part of its contemporariness.

Berger: I don’t know any of those groups. [Laughter]

Levitin: We’ll fix that.

Question: Is there any album that is generally considered their weakest or that you like the least?

Bromell: That’s interesting … that I like the least. I think that there are critical opinions about what are the best Beatles albums, but I fall into the category of those who love every single album for a different reason. I don’t know how you all feel, but when I wrote Tomorrow Never Knows, I couldn’t write about every song in every album, alas, so I had to make choices. And so to some degree I do think those choices do reflect my deepest feelings about what are the truly great long-lived, interesting Beatles albums, and for me they are Revolver, Rubber Soul, and The White Album, and not Sgt. Pepper’s, for example, which many people would think, “How could you leave that out,” but I leave it out. What would you all choose?

Berger: I absolutely agree. For me, Sgt. Pepper’s is an attempt at a song cycle, but it’s a very overt attempt. What strikes me about Rubber Soul—and I’ll say something about The White Album in a moment—is that Rubber Soul is a song cycle. There are key relationships. The album was conceived as a unit, I’m absolutely convinced. There are interesting connections between adjacent songs. What’s interesting to me about The White Album is that Nick makes this argument that it’s about anarchy – it’s about throwing all of this stuff together, which I buy. On the other hand, something was plaguing me about that argument. So as my wife and child can attest, I spent much of the last few days sitting with a tuner and The White Album and trying to compute all the keys for each song. And there is a remarkable tonal structure in the album as a whole. So I think there was a very visionary sense of musical organicism.

Bromell: In the hallway of my dorm in 1968, one day I woke up and someone had written in large black letters, “Anarchy needs leaders.” [Laughter] So, yes, there’s a lot of anarchy there, but there’s kind of this control.

Question: I’m interested in the cultural context in the music. I had the unique experience of going to a high school of 500 students with one African-American student, who was my older brother’s best friend. So I looked up to them. I was listening to Sam and Dave, The Temptations, The Four Tops, Otis Redding. And meanwhile, 499 other students were listening to the Beatles, and I kept saying, “Yeah, that’s good, but you
to listen to Otis Redding.” When I’d ask a girl out and she turned me down, I’d go home and listen to “I Have Dreams to Remember” because that’s what was speaking to me. And it wasn’t until I got into college and my friend said, “Here are all my old Beatles albums,” and I said, “Well, yeah, I kind of know of them.” So he introduced me to them. So my question is not so much as a culture, but I would like you to speak about it could be one person or a couple of people you respect that led you to find the Beatles, or in my case it was the whole Motown movement until I got away from the free records I was listening to from my brother.

Bromell: I guess I’m the only one old enough to answer this question. [Laughter] Well, you know, I’m not sure. I’m going to respond, but I’m not sure it’s to your question. We’re here talking about *The White Album* and the Beatles, and how about next year we talk about Motown, or Stacks Records – even more interesting than that? You know, there’s just so much great music that one could talk about. It’s important to guard against simply identifying the Beatles with the sixties as though they have some kind of a priori claim to represent what that period was about. It’s not true, and I wouldn’t want to imply that it is true, either.

**Question (continued):** I guess what I was trying to get at is the culture being defined down to one person you respect and that person says, “Oh, you have to listen to this.” And how that then exploded with the Beatles as a movement. Then everybody was almost required to listen to it or you were out of it.

Berger: We were talking about something similar before. I asked Nick why the Grateful Dead are not anywhere in his book.

Bromell: Maybe you shouldn’t say this now. [Laughter]

Berger: I was very pleased that his answer was “Because they stink.” [Laughter] But for me, there was this element of peer pressure. I had to like the Grateful Dead, and I never really liked them. I never really liked their music. I’m sorry. Well, I like some of it. But the fabric of music in America in the sixties, as Nick said, as at any time – and it’s true now, too – is so rich and it’s so diverse and there’s so much cross-current and appropriation, for better or for worse, in different directions, that it is a little bit…. We’re arbitrarily talking about the Beatles tonight.

**Question:** I have two questions and a shameless plug for my favorite living band, a local group called The Sun Kings. They embody the essence of the Beatles.

Berger: You do know, by the way, that the Sun King was the patron of Esterházy, who was the patron of Haydn. [Laughter]

**Question (continued):** I’ll have to mention that to them. They can put it on their Web site. So the first question is essentially: If you could extrapolate to imaginary, ultimate, your wildest dreams, how the Beatles would have progressed if they had stayed together – what could have happened in the decades since then? And the second question really relates to the band I was referring to, The Sun Kings. I happened to walk into a club where they were playing and I was about two inches away. I’m a classical ballet-trained dancer, now kind of a recovered techie now doing choreography. So the question is: Neurologically, my mind is like completely switched off and there’s this channeling of
music through my body in way that is just like…. People watch and they say, “Wow, you’re coming into another zone.” It’s really remarkable: the different extreme emotions that they have from that “Helter Skelter” kind of intensity to the sweetness of something like “Blackbird” or “Julia.”

Bromell: Well, I hope you’ll answer the neurological question. I think that it actually would be a really fun thing to do to write a novel or create an album that is what the Beatles would have done had they gone on and on, but in truth, we know what the Beatles would have done because they did it. They broke up and they each went out and did their own thing, and that falling apart of the Beatles was a synecdoche, a representation, of the falling apart of a kind of cultural unity moment. So in a way you can’t fantasize about what the Beatles would have done if they had stayed together without thinking about some other fantasy about would America and the world … how could it have become a very different world and place that somehow would have made it possible for the Beatles to stay together.

Levitin: The world was continually reacting in some ways to the Beatles music as it was reacting to art – the art of Warhol to the art of Kubrick. That’s what happens. It’s not just that the artists are responding to the world, but the world responds back. But we do have some tantalizing clues to what might have happened had they stayed together. For example, we know from the demo sessions that the Beatles had recorded or had tried to record songs like Paul McCartney’s “Teddy Boy” and John Lennon’s “Jealous Guy” and George Harrison’s “All Things Must Pass,” and they didn’t make the cut. They weren’t able to get an arrangement they were happy with; they didn’t agree that those songs came up to their standards. So their composers did release them on their own as solo works, but the evidence is that they wouldn’t have made it as Beatles songs. The Beatles would have pushed harder to get something different, and you can also imagine that a song like “My Sweet Lord,” which George Harrison was composing … there was no way Lennon would have gone for that on a Beatles album. And then Lennon’s rejoinder to it: “God is a Concept by Which We Measure Our Pain”: that wouldn’t have gone because Harrison wouldn’t have wanted to play on that. So there was this dynamic also in the way that “While My Guitar Gently Weeps” had to be made into a Beatles song, as wide as the sphere was of things that fit in, there were just some things that didn’t fit.

Question: I just wanted to ask your opinion on whether you think it’s the melody and the harmony and the music that makes the Beatles great, or is it the lyrics and the message?

Levitin: Yes, it is. [Laughter]

Berger: Well, with the exception of “Glass Onion,” which I mentioned before, which was intentionally poor tech setting because the accent is on the wrong syllable, and there a couple of songs where the Beatles intentionally screw up the tech setting, but they were remarkable – they were really wonderful – tech setters. There’s an awful lot for composers to learn by thinking about it. So I don’t know if it’s the lyrics themselves, which sometimes are stunningly beautiful, to me, and sometimes are really silly, but I do think that, from a musical point of view, they were remarkably innovative and creative.
**Bromell:** I think that I completely agree. I think that they wrote some great songs where the lyrics are great and they wrote some songs where there are some great lyrics in the songs, but their standards for their lyrics were not as high as their standards for the music. So even in “While My Guitar Gently Weeps,” I have to say I kind of flinch every time I hear, “I look at the floor and I see it needs sweeping.” [Laughter] And I think, “God, that’s true that not a lot of words rhyme with weeping, but [Laughter] maybe there could have been someone out there ‘reaping’ or anything but….” So, you know, I agree.

**Gonnerman:** Jonathan Berger, Nick Levitin, Nick Bromell, thank you very much.
[Applause]

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**Daniel Levitin, Bell Chair in Psychology, McGill University**
Daniel Levitin earned his bachelor’s degree in cognitive science at Stanford, his doctorate in psychology from the University of Oregon, and completed post-doctoral training in neuroimaging and psychology at the Stanford University School of Medicine and UC Berkeley. For a decade, he worked as a session musician, commercial recording engineer, and record producer for countless rock groups, including Santana and the Grateful Dead. He has published extensively in refereed scientific journals, audio magazines, and is the author of the bestselling book, *This Is Your Brain On Music*.

**Nick Bromell, Professor of English, UMass Amherst**
Nick Bromell earned his doctorate at Stanford where he studied the literature, intellectual history, and popular culture of the United States. In addition to essays and reviews he has written for numerous scholarly and popular publications, he is the author of *By the Sweat of the Brow: Literature and Labor in Antebellum American Culture* and *Tomorrow Never Knows: Rock and Psychedelics in the 1960s*. He is currently writing a book on U.S. literature and democracy.

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Jonathan Berger has composed symphonic works, concerti, works for all varieties of chamber ensemble, and electroacoustic music. In addition to composition, he is an active researcher with over 60 publications in a wide range of fields relating to music, science, and technology. His most recent CD, *Miracles and Mud*, was released last year. He and Daniel Levitin are now working on an article on the Beatles and Joseph Haydn.

**Comments?**
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