They are the Audi craftsmanship you're looking for,
along with the eye-catching Audi designs you desire.
They even come equipped with the confidence
of a century's worth of Audi expertise.
And if you happen to get nostalgic,
you can still take your Audi e-tron to a gas station
for a drink or a snack.
How you get there matters.
And with five fully electric Audi e-tron models
available now, getting there has never been easier.
Audi, progress you can feel.
Learn more at AudiUSA.com slash electric.
So Casey, I get a lot of deranged
and unintelligible texts from you.
You're welcome.
Thanks.
And even by those standards, the one
that I got from you last night while I was sitting down
for dinner was pretty wild.
So this was a text that contained a link to something
called bonk.
And your text said the following, bonk me on bonk.
My handle is Casey Newton.
That's right.
So Casey, why are you asking me to bonk you?
And do you know that I'm happily married?
I did hear that, although I was told there was an AI
with different ideas.
But bonk is the app that everyone in Silicon Valley
is talking about.
And by everyone, I mean a few of my friends
who showed it to me.
What is this app?
OK, it's the best.
So do you remember the app Yo from back in the day?
Yes, this was an app like 10 years ago that did only one thing.
You could push a button and it would say Yo to someone.
That's exactly right.
It was like when there was all this buzz
about these new messaging apps.
And then this messaging app came along that could only do one thing.
And it was sort of like a parody of an app.
It felt that way, and yet it was a sort of parody

that raised $1.5 million and a $10 million valuation.
2014 was wild.
Love those times.
But then Yo disappears.
And then many years go by.
And then along comes bonk.
Can I tell you about the bonk product?
OK, first of all, I tried to get you to download it,
but you can't because you don't have iOS 17, which is truly funny
because when you see what this app does,
it's not clear to me that it's relying on any of the latest
sensors and graphical upgrades.
I do not yet have the advanced technology required
to run the bonk app.
But if you run, here's what you do.
So you add your friend on bonk, and then you bonk them.
How do you bonk them?
Well, you just see their username on the screen.
So you are showing me this app.
It has a list of three of your friends on bonk
with a big blue button, one for each friend.
That's right.
And if you don't have any friends on bonk,
you can bonk the bonk bot.
There's a bonk bot for you to bonk.
It's sort of like the top of my space of bonk is the bonk bot.
No, this is a prank.
This is a lady for fools to.
So here's what you do.
So here's one of my friends.
And I can just sort of annoy him right now by bonking him.
You're just pressing bonk over and over again.
Every time I bonk him, he gets a push notification.
This is malware.
So ever since I've downloaded this app,
I'll look at my phone and I'll have like 46 notifications
that just say your friend bonked you.
What?
What?
It's like, here's the best part.
So as if that were annoying enough,
when you type over on this menu, there's a leaderboard
and it shows you how many bonks you've sent

and how many bonks your friends have sent.
Wait, you have bonked someone 5,064 times?
No, that's no.
One of the people who introduced me to the app
has sent 5,000 bonks this week.
I've only sent 438.
Grounds for being arrested.
What I love about this so much is it's like,
what if yo was just a tool for like benign harassment?
Yeah, this is a harassment app.
Absolutely, absolutely.
But you know, at the same time, it is nice during the day
just to sort of let someone know
that you're thinking about them,
even though you have nothing to say,
when you have nothing to say,
but you still want to say something,
that's when you bonk.
Well, I will not be installing this app anywhere.
On any device that I own,
because the thought of getting 57,000 bonks a day from you
just fills me with dread and terror.
Well, you are somebody who worries you spend
too much time on your phone,
so I understand how you wouldn't want to install it.
But if you are looking to literally waste your life
on your phone, who isn't?
Please check out Bonk.
I was texting with the creator the other day
and he was telling me that he hopes
to get it into the app store soon.
Right now it's only available on testlight,
which is sort of the beta testing app on iPhone,
but you can find it at bonkbonkbonk.app.
No, no, no, do not tell a boat,
do not encourage this behavior.
If I were the creator, I would create a bumper sticker
and it would just say, honk if you're bonking.
No.
Yes, no.
Kevin, this is the need for it.
No, I cannot endorse this technology.
Look, Kevin, think about all the time we spent

talking about misinformation, hate speech,
harassment, all of it.
This is a social app where you can only harass someone
by making them want to turn off their phone.
And that's a new kind of harassment we haven't seen yet,
but it seems very sweet to me.
Okay, well, if I ever get another bonk from you,
I will be reporting it to the authorities
and getting a restraining order, so please stop.
Hey, catch me on bonk.
I'm Kevin Roos.
I'm a tech columnist at The New York Times.
I'm Casey Newton from Platformer
and you're listening to Hard Fork.
This week, what the war between Israel and Hamas
means for the future of social networks.
Then, Kevin visits a prediction markets conference
and we place some bets.
Finally, Osmo CEO Alex Wilczko
on his quest to build an AI that can smell.
So, Casey, we like to have a good time on this podcast,
but there has actually been a lot of very serious news
this week coming out of the Middle East.
I'm talking, of course, about the war
between Israel and Hamas.
And this is a tech show.
We are not foreign policy experts
or experts on conflicts in the Middle East.
There are plenty of great podcasts
where you can get that kind of information,
but I did wanna talk about it today
because I think there's a really important thing
that I've observed in our social media ecosystem,
which is that from what I can tell,
there has been no place to actually get good,
reliable information about this conflict.
I'm sure I, like you and so many other people,
opened up X and Instagram and all of my other apps
trying to sort of make sense and sort out what was going on.
And I just couldn't do it.
I was just bombarded with stuff that was fake
or misleading or suspicious in some way.
It was very hard to just get the basic nuts and bolts

of what was going on.
And I'm wondering if you experienced that too.
Yeah, but very much so.
I think that one of the ways that we understand
what's going on in the world right now
is by using these social media apps.
Over the past decade plus, we have trained ourselves
when something horrible is happening.
Our first thought has been to go to Twitter specifically
because for the longest time,
Twitter was the best answer to the question
of what is going on.
Because not only did you get reports from the journalists
who were on the ground there
or from the elected officials
who were sort of handling the tragedy,
but you also have these first person reports
of people who were just average users
who whipped out their phone,
they took out a video, they posted a thread.
And this is sort of collectively
how we made sense of things.
But for all of the reasons that we have been talking about
on the show over the past year,
that world is now in chaos.
It has been upended by all of the changes
on the consumer internet.
And so I think that's sort of what brings this story
into our zone is that one of the main ways we have
for understanding events in real time
is just changing radically.
Well, and the stakes are just much higher in wartime, right?
During normal sort of peacetime,
getting bad information on social media might be annoying,
it might be misleading, it might even be harmful.
But during the fog of war,
when there are so many conflicting reports flying around,
images, videos, first person accounts
or things purporting to be first person accounts,
that's when the stakes of conflict
and of information get really real.
So there's been some reporting over the past week
about X as Twitter is now called.

And many of the viral falsehoods
that have been appearing on the site,
people are sharing videos from previous conflicts
that are years old,
people are circulating video game footage
and passing it off as wartime footage,
fake images of celebrities taking sides.
And actually, things that have caught the attention
of regulators in Europe who have warned Elon Musk and X
that by hosting this kind of content,
it may be in violation
of some of the EU's content moderation laws.
Yeah, so there's a lot in there to pull apart.
I am somebody who thinks that Elon Musk
has been laying the groundwork for this for a long time.
And that in a lot of ways,
this is the logical culmination of a story that began
when he decided that he was going to get rid
of the old verification system.
But I mean, does any of that surprise you at this point, Kevin?
It doesn't because Elon Musk,
he's been so clear about the fact that he doesn't,
like the mainstream media,
doesn't want journalists to have sort of special privileges
or status on X.
And he has been boosting his own set
of what he calls citizen journalists,
these people who are sort of amateurs,
many of which have turned out to be questionable
or incorrect.
He warned users away
from trusting mainstream journalists on the subject,
instead promoting two accounts
that are known spreaders of misinformation.
And you had a really interesting newsletter on this this week
where you talked about sort of the failure of X
to live up to its past as a real-time news platform.
Well, again, I think that we have just seen Elon
laying the groundwork for this for months, right?
One of the first things that he did was
he got rid of the old verification badges.
And now you can get one of these badges
by paying $8 a month.

I think probably just as importantly,
you can now make money based on the number of views you get
if you have paid your $8 a month.
And so what are we seeing?
If you look at a lot of people who are repurposing video
of things that happened long ago or video game footage
and trying to pass it off as events in this war,
those people have verification badges, right?
Which suggests to me they are hoping to get a payout
based on the number of impressions they are getting
for spreading misinformation.
So that's actually quite different
from what we used to see in the old days, right?
Lord knows, the old Twitter had plenty of problems
that spread plenty of misinformation.
There were people doing the exact same thing
in those days that are doing it now.
The difference is they weren't being paid to do it.
And at the same time,
Elon has also given these spreaders of misinformation
so many powerful tools.
Yeah, and this is sort of an annoyance
and a frustration for people in the US.
But for people who are actually in the conflict zone,
for people who are in Gaza, who are in Israel,
this is potentially a very big problem for them
if they cannot use social media or X
to figure out what is going on
and maybe getting bad or incomplete information
about their surroundings or their safety.
Yeah, and again, I mean, to some degree,
this was always the case.
Like, I want to be clear.
We shouldn't romanticize what old Twitter was like
or sort of turn it into this thing that it wasn't.
It was never a perfect disseminator of news
in breaking situations.
Right, and I would say particularly like,
five years ago, if you were in the middle of some calamity
and you said like, should I rely on Twitter
to understand what to do next?
I would say like, well, it should be like an input,
but like you should be trying to guide yourself

toward vetted credible sources of information
and random tweets are like maybe not going to be that thing.
But at the same time, I think that the utility
of these networks actually goes beyond understanding like,
okay, where is sort of the worst violence right now
for me to avoid?
It also is about understanding the conversation
around these things, right?
What sort of positions are people staking out?
What is the conversation here?
And that is actually one of the ways
that we make sense of this, right?
And that is another way in which X is just not as useful
as Twitter once was because many of the most prominent voices
here have either stopped using the platform entirely
over the past year or they're being drowned out
by people who've paid $8 a month
so that their voices float to the top of replies.
So just as a means for understanding the conversation
around these terrible events,
X is just not nearly as useful as it used to be.
So where were you getting news?
Where are you getting news about this conflict
if it's not on X?
Yeah, so I spend much more time these days on three networks.
That would be Blue Sky, Mastodon and Threads,
which is Meta's app.
And I was having the most interesting experiences
on Threads of those.
I think Blue Sky is pretty vibrant among a certain crowd,
but Threads has really started to accelerate
particularly over the past couple of weeks
in bringing on just some of the most influential voices
in media in particular.
This is where I'm starting to see the reporters show up
seeing people like your colleague,
Sheriff Frankel, for example,
had a fascinating story about how Hamas was seeding X
with these violent videos as part of its terror campaign.
I learned about that on Threads.
People who are in the more pundit sphere,
they were sharing their analysis on Threads.
And so, it definitely is not what the old Twitter was

for following real-time news for reasons
that we can get into if you want to.
It has started to feel a lot more vibrant
and I think has revealed how desperate people are
for something to replace what Twitter used to be.
Yeah, so I found this part really interesting
because I agree with you that it seems like Threads
has sort of picked up at least among the journalists
that I know and follow.
And at the same time, when we talked to Adam Maseri,
the head of Threads earlier this year,
he was pretty explicit about not wanting it to be a place
where everyone came to get news
about important global conflicts.
They've been trying to position this
as something more like a TikTok for text,
something that is going to be fun and entertaining and light
and sort of not drag them into the morass of content moderation
that they have seen on their other products.
So, how do you think that tension is playing out right now?
Well, it's an interesting question
because I'm not sure what the positive vision
for Threads was when it launched.
In fact, I think like many apps,
they wanted to just put it in the world
to see what people did with it.
I think they would have been thrilled
if most of the people who showed up wanted to do
makeup tutorials and Amazon hauls and productivity tips,
but that's just kind of not how it is playing out.
And most of the brands that were doing these try hard posts
when I first started using the app in July
seemed to have disappeared out of the algorithmic feed.
And what I'm seeing in their place
are a lot of journalists, pundits,
maybe the odd elected official,
and they're having discussions
about what is happening in real time.
So, I do think that puts Metta at a crossroads
to decide do we want to lean into the direction
of where some of our most prominent users are guiding us
or do we want to put our foot down
and build in a different direction.

So, Adam Massari, the head of Threads,
has been sort of, seems like he's kind of been backtracking
a little bit off this kind of anti-news
or sort of we're not gonna focus on news statement
that he made to us earlier in a Threads post
just the other day, he said, quote,
we're not anti-news, news is clearly already on threads,
people can share news, people can follow accounts
that share news, we're not going to get in the way
of any either, but we're also not going
to amplify news on the platform.
To do so would be too risky given the maturity
of the platform, the downsides of over-promising
and the stakes.
What do you make of that?
I mean, I think that there is a way
of interpreting those comments that is less
about an ideological opposition to wanting to build
an app that is useful for reading journalism
and more is about what will make this product successful,
right, like if I pulled you aside and I said,
Kevin, I have an incredible new app to learn
about all the horrors in the world in real time,
you might say, I don't know if I need that in my life, right?
But if you have this very vague statement about, Kevin,
there's a new app where people are connecting
and sharing and exploring their interests,
that might just have a broader appeal, right?
And so I think that they don't want to throw
in the towel yet on having the broader appeal
before they at least give it the old college try.
What's interesting though, is that there is now
this calamity which has people clamoring
for something very specific in a way
that they just haven't seen before.
And for what it's worth, I do think that there are
a couple of things they could do to at least explore
this direction without going all the way in.
And it might be interesting to talk about
what I think those two directions are.
Yeah, let's talk about that.
Okay, so what does it mean to lean into news, right?
Because I thought that Maseri got kind of undue criticism

because he didn't say like, don't post news here,
journalists go away.
He was just like, if you think we're gonna build you
a ton of special features,
like this is probably not gonna happen.
What are those features?
Well, something that people just clamor for
on threads all the time,
one of those things is a trending topics page,
which we actually have learned Meta is working on.
It seems like that's gonna be coming to threads very soon.
People also want hashtags,
because that's a way to analyze the news in real time.
And then there's more complicated stuff,
like could there be a tweet deck version of threads,
where you-
Like a thing for power users who stare at it all day.
Or could you create lists of users?
So it's like, oh, something terrible is happening
in the Middle East.
I know I can always get good information
from these 20 people.
That to me is an interesting questions
of whether Meta pursues that.
And then the other question is like,
well, let's say they don't do that, right?
They say the hell with it.
We don't wanna get more involved with news
for all the reasons that they've already said.
What do they do?
What is a more TikTok version of threads look like?
And I, you know, so when I was trying to think through that,
I just opened up TikTok and I'm like, well, what's not there?
And it's like, well, threads doesn't have messaging yet.
It doesn't really have a lot of creative tools.
There's like, it doesn't really seem like a home
for short form video.
Those are all directions they could go.
And it probably would be a lighter, more fun,
more entertaining app.
The question is just what gets them
to the billion users that they want?
Is it just sort of this nebulous vision

of a bunch of people having a good time,
mostly not talking about the horrors of the world?
Or is it something that a lot of people
are telling them right now,
I desperately want this, please build this?
Yeah.
And by the way, I am not saying that I know
which of those two things they should do.
I do think that there is a possibility
that if you're just thinking about this
from a sort of like cynical capitalist perspective,
they might wanna stick to their plan
to just build TikTok for text.
But I don't know, man.
A lot of the most successful apps of all time,
they got successful once they started to do
what their users were asking them to do.
Yeah.
I mean, I share that sense of like desire for a product
that lets me know what is going on in the world
or I can find good, at least sort of better
than average information about an unfolding global conflict.
At the same time, I worry when I see journalists
flocking to threads, introducing themselves,
saying, I'm here, this is my new Twitter,
I'm gonna use this the way that I used Twitter before,
in part because this is just not a company
that has a good track record when it comes
to disseminating reliable information
to a large base of users.
We saw what happened when Facebook took
over the news ecosystem.
It was not good for Facebook,
it was not good for users of Facebook,
and it was not good for journalists
and media organizations.
It has taken a long time for the media
to kind of pry itself away from the fire hose
of Facebook traffic.
And Facebook's domination of the news ecosystem
really did have harmful effects,
especially outside the US,
especially in zones with conflict and war and strife.

We've seen a lot of the harms that have resulted from that.
And so when I see journalists sort of wanting
to throw their attention into another platform
owned by the same people who brought us
the last series of information disasters,
I just think like, what are we doing here?
Why are we trusting this company?
It feels a little bit like Charlie Brown with the football.
Well, and if what was being proposed here
was meta was going to news organizations
and saying, we're gonna give you a million dollars a year
to go hire some people and we want you
to post your news on threads first
and we'll create a special article format
that only exists on threads
and all the publishers in the world said,
oh yeah, that sounds great to us.
I would agree with you.
That is a bad path to go down.
We're not gonna go down that path again.
But I am somebody who believes
that Twitter essentially discovered a huge desire.
It might be niche in comparison
to like what TikTok is for today, by example.
But there are clearly a lot of people
who want to have that sort of,
let me just scroll with my thumb,
get a quick sense of what's happening in the world.
I want it to be multiple publications.
I want it to be not just, you know,
reporters from all these different publications
but celebrities, politicians,
get all those people into one room.
And as Twitter started to collapse,
there were some people who said,
we'll never have it again.
Like there were these special conditions
that created this and it was just kind of a one-off.
I don't believe that.
I think those people want to get back in a room.
And I think over the past few days,
we've seen them getting onto threads.
Yeah, I agree with you that there does seem

to be this kind of organic demand
for something like the old Twitter.
But I just, man, I just,
we have run the experiment where Mark Zuckerberg
and Adam Misery run the global information ecosystem.
It did not end well, right?
We had ethnic violence.
We had far-right authoritarian seizing power.
We had like a global insurgence of misinformation.
Meta specifically has proven that it cannot do both things.
It cannot build entertaining apps that grow at a huge speed
and, you know, have hundreds of millions
or billions of users
and distribute information responsibly.
They have failed that test.
And now it drives me insane
to see journalists and media organizations
just like lining up to trust them again
with such a vital task.
Oh, sure.
But, you know, at the same time,
journalists have done something else insane,
which is they've bet their entire futures on Google, right?
So much of the revenue pumping through
the digital media economy
is just people writing quick, cheap stories
and hoping that they get discovered
by the Google algorithm, right?
And as we have talked about on the show,
there is a wave of generative AI
that is coming for all of those stories.
And I truly am terrified
that it is gonna leave digital media in ruins.
And if and when that happens,
and more and more of those sites go away,
where are people going to find their news, right?
The web that we are enjoying today
truly might not exist in five years.
And if that is the case,
then people are just going to need a place
to talk about things.
And it might be that it is not threats.
I am so agnostic about whatever platform it becomes,

but I do think that threads has been positioning itself
to grow fast in a way that Blue Sky and MasterNod
just have not been.
Yeah, I agree with that.
I know that this is going to sound like me
being like a shill for the mainstream media
or like a company man,
but I really do think that if newspapers had never existed
and you pitched a startup that would sort of aggregate
all of the stuff that went viral on social media
the day before and fact check it
and verify it through on the ground,
discovery and reporting,
and then sort of rank it in order of importance,
add some analysis and opinion in there,
package it up and put it on your doorstep
in a physical form in the morning
or on your phone or your tablet.
I think that would be like a very popular product.
I think what a lot of people are clamoring for
is exactly what the media in some idealized version
of its past was providing.
Now, obviously there are things that you can get
on social media that you can't get in the mainstream media
at least, you know, right away.
And it does take some time for reporting to happen,
but I really do think that what we've seen
over the past week in this situation
is just the incredible necessity of people
doing professional reporting
on what is going on in a global conflict.
Absolutely, and you know, if the question is like,
would I be better off going to a newspaper homepage
to get my news about this than checking social media?
I believe that the answer is yes, right?
At least as a starting point, at the same time, again,
it is valuable to see first person perspectives
in real time on some issues, right?
Think about what a lot of CNN is.
It's people just with cameras pointing cameras at things.
That is a lot of what we got out of the old Twitter.
So, you know, look, if you're a publisher listening
to this thinking, what should I do?

You do have an opportunity to go out
and build your own distribution.
You do have an opportunity to build a better product.
You have an opportunity to market yourself
as a better product than what people
are making do with right now.
I think all of that is very real,
but I just also think we're keying ourselves
if we don't believe that there is a value
in a distributed social network
where people are just showing up and saying,
here's what I saw today and here's what I think about it.
Be as over and over again,
we learned that there is demand for this.
Totally.
I just think publishers should not have to choose
between giving Elon Musk control of their industry
or giving it to Mark Zuckerberg.
I just do not think that that is a choice
that media organizations should make.
Well, Kevin, where have you been getting your news?
I mean, so much of it has come
from just mainstream media sources.
I've really found myself just going back to, you know,
the New York Times app, the Wall Street Journal app,
websites of local news organizations in Israel
and around the conflict zone
where I can read English language reports
of what is happening on the ground.
It sort of feels like how I consumed news 10 or 15 years ago
before social media really took off.
And it's making me wonder if this kind of decade long dream
of kind of like the internet as a global town square
of there being these sort of gigantic central platforms
where everyone went to sort of figure out
what was happening in the world,
whether that dream is something that is gone.
It sounds like you don't think that is.
No, because what people want in times like this
is not actually just the vetted fact checked account
of what has happened.
They want the conversation around it, right?
They want to get some sense of how should I feel about this?

How are other people feeling about this?
What are the arguments that are being made, right?
They want to see people speculating
about what might happen next.
They're all these other parts of a story
that are just typically not in a mainstream newspaper story
for very good reasons, right?
The newspaper stories are good at what they do,
but they are only part of the solution.
So unless the media is able to sort of aggregate
all of the conversation in one place,
there's just always gonna be a market for these social apps.
Yeah, I agree with that, yeah.
I mean, obviously like which social app wins
is probably the least important question about all of this.
At the same time, there is a profound desire
to understand important global events in real time
and what gets built will just always be of interest to us
because it is how the future is shaped, right?
Is in the places where the news is being made
and distributed and being discussed.
And so whatever it winds up being,
whether it's a mainstream news site
that's figured out a great new thing
or whether it's a social app
or it's something that hasn't been built yet,
I just think it will always be of interest to us
here on this podcast.
Yeah.
Coming right up, we're gonna switch gears
and talk about another way that people are starting
to discover what is going on in the world by betting on it.
Hmm.
Want to be successful, it'll take certain sacrifices.
You'll need to come in early from surfing all morning,
work through lunch that you picked fresh from the garden,
bend over backwards during video yoga
and burn that midnight oil.
Hmm, is that lavender?
Because the rules have changed
with HP Hybrid Solutions and Intel Core i7 processor.
HP, visit hp.com slash work happy.
I play Wordle in spelling bee every single day.

That's the first thing I do.
Play Wordle while making coffee.
I pour myself a cup and do the crossword,
which is the jewel of my morning.
I started Wordle 194 days ago and I haven't missed a day.
So what's our starting word today?
I think it should be ocean.
Storm is a good one.
It's B-R-I-S-K because it's a brisk day outside.
At this point, I'm probably more consistent
with doing the crossword than brushing my teeth.
I don't think there's a day that I've missed it.
I'm definitely a Monday or Tuesday player right now,
but I aspire to do Friday and Saturday puzzles.
I have seen you do spelling bee during meetings
when you're supposed to be paying.
That never happened.
When you win a puzzle, where you get that you're a genius,
I always take a screenshot and send it to my wife.
The New York Times crossword.
It really is a moment of zen that cleanses my brain.
I wish the days were shorter and the wordles were longer.
Join us and play All New York Times games.
At nytimes.com slash games.
Kevin, you did some great reporting this week
about prediction markets,
and it all started at something called manifest,
which I read that and I thought,
well, is this just a festival for men?
Tell us about what manifest is.
So this is a field trip that I have been planning for a while.
This was a very fun and interesting reporting trip
to a conference for what they call forecasting nerds.
So people who like to predict the future
and bet on the future.
And this was actually something that came out of an episode
that we did several months ago about LK99.
Do you remember this episode?
Yes, of course.
So this was the room temperature superconductor
that a group of scientists in South Korea
had claimed to have come up with.
And there was this period of maybe a week or two

where people were hotly debating
whether this was real or not.
And we mentioned on the show the existence
of something called manifold markets,
which is a prediction markets platform
where people can go and wager fake money on real world events.
And one of the most popular markets was about LK99.
And it was sort of a way to track
like what the smart money people thought was going to happen
and whether this prediction of a room temperature superconductor
would pan out.
It did not, right?
LK99 did not turn out to be a room temperature superconductor.
But I heard from one of the founders of manifold markets
who said, if you're interested in prediction markets,
we're actually having a big conference in a few weeks
in Berkeley called Manifest and you should come report on it.
And I thought, well, that sounds like a fun trip.
Yeah, I had actually predicted
that you were going to go to that.
So that was interesting.
So you get there and like sort of describe the scene
because what you've described,
I'll say it sounds a little bit dull,
but then I read your story
and it actually seemed like it might be a good time.
Yeah, it was a very strange event.
And I say that like I had a good time and I learned a lot,
but it was definitely not what I was expecting.
I was expecting like, you know,
a sort of statistics conference where people in dress shirts
and dockers would be going around
like comparing their predictive models of the world.
But it was more like a party than I thought.
I described in the article as sort of a cross
between a math Olympiad and Burning Man.
Like there was actually an orgy at this conference.
And I know that because there was also a prediction market
asking whether or not there was going to be an orgy.
I think when I got there,
it was like 28% possibility.
And by the time I left,
someone had had an orgy and closed out the market.

Now that just feels like leading the witness to me.
And I feel like if I go into the prediction market
and I say, I wonder if there will be an orgy at this party,
anybody, anybody,
and then just sort of watch the numbers slowly go up.
So this is kind of one of the things
that I am curious about is,
does the creation of these markets
wind up influencing the events?
Well, yes, and I want to get there,
but I think we should talk about what this idea is for us.
Oh yeah, tell us about what this is.
You know, when we talked about it on the podcast
in the context of LK99,
I believe we made some snarky comments about like,
oh, these are just gamblers who like to bet on everything.
But I would say after going to this manifest conference,
there's also a real movement
that I think is worth paying attention to here.
Prediction markets, this is not a new idea, right?
People have been betting on things like elections
for centuries, actually in the 19th and early 20th centuries,
it was common to like open up the newspaper
and see a sort of betting odds breakdown
of who people thought was gonna win the next election.
And I feel like my entire life,
I've been hearing about the wisdom of crowds.
Yes, that was a very popular idea.
This idea of prediction markets was sort of revived
in the 1990s by a group of economists who thought,
well, markets collect information.
You can bet on the price of a company's stock
or you can bet on corn futures.
What will the price of corn be a year from now?
You can also bet on sports games.
Why can't you bet on other things?
Why can't you bet about scientific discoveries?
Why can't you bet about policy implementation?
Why can't you bet about silly things
like whether there's gonna be an orgy
at a statistics conference?
So there's been sort of a real resurgence
in the last few years led by this group of people

called the rationalists.
Do you know much about the rationalists?
A lot of it from reading your reporting, but yeah.
Tell us a little bit more about the rationalists.
So rationalists are a sort of loose collective of people
who are sort of committed to examining their own beliefs.
They want to sort of get closer to the truth.
Big figures in the movement are people like the guy
who runs this blog, Astral Codex 10,
which used to be known as Slate Star Codex.
Eliezer Yadkowski is sort of an AI safety researcher
and a prominent sort of rationalist blogger
who started a website called Less Wrong.
So there's a crew of people largely based in the Bay Area,
but also spread out throughout the world
who are sort of doing what they would describe
as rigorous empirical testing
of everything that they believe and do.
They love attaching probabilities to things.
So I want to sketch out the vision
for what they believe prediction markets could do.
Because they're not just saying like,
this could be a way to make money
by betting right on things.
They're saying like,
if you have everyone betting on everything,
then you end up with a system
where people are incentivized to understand the truth.
Okay, so you have a bunch of people
making predictions about things.
How does that lead us to a better understanding
of the truth or what's gonna happen in the future?
One example that someone at this conference
brought up to me is like,
imagine you have someone who's a believer in QAnon
and they say,
oh, Democrats are harvesting the blood of children.
And you are a person who doesn't believe that
who thinks that's a conspiracy theory.
And so you say, okay, I want to bet.
All of a sudden that person has to decide,
like, is this something that I believe in strongly enough
to wage your money on it?

Or is this something that I'm just sort of saying
for attention?
And so the rationalists and the people
who believe in prediction markets
think that if you basically had to force people
to put their money where their mouth is,
it would moderate their views.
They would back off some of their crazier beliefs.
I mean, I would love to believe that.
Unfortunately, I think a lot of QAnon believers
would happily give you money.
And if you showed them conclusive evidence
that all of their beliefs were false,
they simply would just not accept it.
And then they probably wouldn't give you their money.
But like, have these people predicted anything interesting?
Or like, what is their track record?
So the track record of prediction markets in general
really depends on what kind of prediction market
you're talking about.
So there's been some research that shows
that prediction markets have some utility
when it comes to predicting things like elections.
But prediction markets are also wrong a lot
in the same ways that some polls are wrong a lot.
And I talked to a bunch of economists who basically say,
if you had a perfect prediction market
where everyone was participating,
where everyone had sort of diverse sources of information
and expertise and where all of the people
with the best information were sharing that information
in the form of making predictions,
these things would be quite accurate.
But there are a number of things
that keep that from happening, right?
These are very tiny platforms still,
manifold markets who put on this conference
has something in the neighborhood of 50,000 users,
which is just very small relative to like
the number of people who bet on
even like sports games or something.
And so basically if a market is small,
if the people who are in that market

don't have access to good information,
and if the question is not something
that can be sort of settled with a simple yes or no outcome,
prediction markets don't work as well.
But interestingly, I was told that this is not
a new idea to the world of tech
that actually Google has run its own prediction markets
internally for employees.
So if you worked at Google, you could bet-
On whether it would become a search monopoly.
Yeah, and everyone who made that bet got paid.
No, it was, they used a fake currency called Goobles,
and you could bet on things like
will this project launch in time
or will Gmail get to this many users by this date?
And the company's leaders use this
as a way to like gauge employee sentiment
and sort of when people could bet anonymously,
they could actually get people's true opinions.
Wait, that's fascinating.
Do they not do this anymore?
Well, they were playing around with this as recently as 2021.
And there were people I talked to at Manifest
to believe that this is ultimately
how all companies should run.
Like you get a job at a company
and a prediction market opens up that says,
in a year, will Casey Newton be more or less successful
than we expect him to?
And everyone in the company would bet
on whether they think you will succeed at your job or not.
And over time, you would essentially see
who is the best at forecasting people's performance,
and you could put them in charge of your hiring process.
That sounds so unbelievably stressful.
By the way, if you were really good
at the Google predictions market,
and so you had more Goobles than anyone else,
and then they shut down the market
and you were stuck with all these Goobles you couldn't use,
we want to hear from you.
I think that would make for a good story.
The Goobles story is really interesting,

but it brings up something else I want to ask you about,
which is the potential for people
to manipulate these markets, right?
You set up a market,
and then you either have some insider information,
or you just sort of try really hard to make the thing happen.
Yes, I actually saw insider trading happen
because I was interviewing someone at this conference,
and he pulled out his phone,
and he showed me a prediction market
that had been placed on manifold
about whether The New York Times would cover manifold
in an article in the year 2023.
And as I was talking to him for this article,
he was placing a large bet on, yes, on that market
with his insider information,
which is that a reporter from The New York Times
was, in fact, interviewing him for an article.
And how does the platform view that?
Is it just sort of, well, all's fair,
and love and prediction markets?
So they actually think that inside information
and insider trading is good
because people with inside information
have the best information,
and they can bring it to a market.
They have some sort of elaborate theoretical underpinning
for not believing that insider trading
actually should be illegal.
Right now, all of this is play money, right?
Because of our gambling laws in the US,
there are a couple sort of small real money prediction
markets that are very limited,
and it's not worth going into why,
but most forms of real money prediction markets
are not legal in the US.
Right, and at manifold, they use something called mana
as their virtual currency,
which is also the same currency that you use
to cast spells and magic the gathering and Diablo.
So you're gonna wanna manage your resources wisely.
Exactly, so this is this play currency called mana
that you can use on the platform.

They have leaderboards for who's got the most mana.
You can also convert it into charity donations.
They are not allowed to pay out real money
for people who are right on these gambles,
and the people at this conference were upset about that.
They think this should be legal.
I have some concerns about that.
I just don't know what it would look like for a society
to be gambling on everything all the time,
but they are sort of of the mind
that the benefits of legalizing this kind of prediction market
would outweigh the costs.
You know, I gotta say, Kevin,
I'm a really mixed mind about this
because on one hand, the idea of people
betting play money to guess what might happen
seems totally innocuous, have a good time.
It seems like you had a great time at this conference,
seemed like all the other people were there too.
But I start to hear things like,
well, these folks think that insider trading
should be legal, and I just start to think,
keep them away from the real economy.
And this whole idea that we make better decisions
when we have skin in the game,
I just think it's been really challenged
over the past few years, right?
Like this was one of the big arguments for crypto.
And crypto is the place where we used to hear all the time,
you gotta have skin in the game.
I use, we were told for years,
you can make a better social network
if you have skin in the game, right?
You can develop a better relationship
between musicians and fans
if the fans have skin in the game.
The whole idea of the board-AP yacht club
was give people skin in the game
and they'll be able to make movies.
And it all just kind of came to nothing.
And one of the reasons was that
when you give people skin in the game,
and everything just has this like gross economic incentive

tied to it, it just changes behavior.
And people start kind of behaving in antisocial ways.
So what do you think about the value
of people having skin in the game?
And is it possible that they're overstating
the benefits here?
I think it's totally possible.
And that's a really good point you brought up.
But one application of this
that I actually think is kind of interesting
would be in our industry, in media.
I had a conversation with the guy who runs Astral Codex 10.
And one thing that he was saying is like,
if the New York Times put little like prediction market things
at the bottom of articles, for example,
that might give readers a better sense of like what
the probabilities behind the news events
that they're reading about are.
So you could have an article about
who will be the next speaker of the house.
And then at the bottom of the article,
you could have a little widget that sort of gave you
the prediction market for someone specific
or sort of an indicator of where the betting odds
were on various people.
And that might actually help you come to
a better conclusion than just reading the article alone.
Do you think that makes any sense?
Yeah, I think you'd subscribe to the New York Times
and you're given a certain amount of New York tubals.
And then you can sort of bet your tubals
on who will be the next house speaker.
And, you know, I mean, what that makes me think of
is the way that polls will be gamed on Twitter
in the heyday, right?
People would sort of say like,
hey, do you think this thing is gonna happen?
And then it would get gamed as sort of the most zealous
partisans would stuff the ballot box
until the poll was over.
And I wonder what mechanisms might be put in place
to prevent something like that from happening here.
But like, on balance, I'm persuaded

that this is an interesting technology.
And one thing that I have just observed
in moving through Silicon Valley
is that you do just constantly meet people
who are into prediction markets, you know?
It's like, along with poker,
like these are the two preferred forms of gambling
and increasingly ways of socializing here
in our strange little corner.
Totally, I mean, the first place I saw this take off
was among AI researchers who love to bet on, for example,
what year we will get AGI
or like when the first AI-generated screenplay
will win an Oscar and things like that.
And so they really are sort of running prediction models
in their heads at all times.
There's this sort of like cohort of people
who are very into what they call Bayesian analysis
or like attaching probabilities to things
and living their lives that way.
Do I think that is the way most people live their lives?
Absolutely not.
But it is sort of an interesting idea.
And as someone who makes predictions sometimes
as part of my job, it's interesting to contemplate
a world in which your position as a pundit
or a columnist or a newsletter writer
would be quantifiable in some way.
Like readers of platformer could go in and say,
okay, Casey's predictions were 75% right last year.
So I'm gonna trust him more,
but if his predictions fall to only 50% right next year,
maybe I'll cancel my subscription.
By the way, how amazing would it be
to like have the pundit score that sort of said,
this person predicted these like 50 concrete things
in the past year and like 12 of them happened.
That feels like that feels like the sort of information
that the right person would sue
to get taken off of Google.
Totally, but you gotta spend your Googles
to get that taken down.
So should we set up a prediction market?

Let's do it.
Let's do it.
So I'm gonna log on to manifold here.
You already have an account
and do you have mana in your account?
I do, I have a thousand mana.
Have you won any mana based on your bet so far?
No, I lost.
I didn't even bet on my own market,
like which was so stupid
because I knew I was gonna write an article.
You're gonna write the story.
But I thought this is gonna get me investigated by the SEC.
So I'm not gonna do this.
That's the last thing you need
is Gary Gensler at your doorstep.
Okay, so on the front page,
you can see all of the bets that people have going on
right now, there are a bunch about Israel and Hamas.
There are a bunch about the house speaker,
about the SBF trial, about the 2024 elections.
And then you can create your own question.
So let's create a question here.
Okay.
So Casey, what market should we create?
Well, something I'm curious about
is will Linda Jacarino be the CEO of Twitter in six months?
Okay.
Will Linda Jacarino be the CEO of X on April 13th, 2024?
We can add it to a topic.
Let's put this in technology.
And then it says we can provide background info
and details.
Background information.
Linda Jacarino is the CEO of X.
Okay.
Is the CEO of X.
And then we have to sort of create our resolution criteria.
If she no longer has that title on April 13th, 2024,
this market will resolve to no.
Otherwise, it will resolve to yes.
So what's your bet?
My bet is no.

So we're gonna bet 100 mana on this.
And that is gonna move the probability by 40%
down to just 10%.
So, oh, because we bet so much.
So there's a sort of algorithm in the background
that's saying, because we're willing to bet this much,
it is therefore less likely that she will get shot.
Exactly.
And we are the only participants on this market right now.
But as other people bet, the probability will move up
or down depending on whether they bet yes or no.
Very interesting.
So now, oh, I accidentally bet twice.
Well, now is that allowed?
Yes.
Okay, that seems like a flaw.
So we've bet 200 mana.
And now the probability is only 8%.
So...
So if you're listening to this,
you're listening to market manipulation.
This is how markets get manipulated by that actress.
That was what they call a fat finger trade
in the financial business.
Okay, so now we have our market up
and we can just keep monitoring it.
And the idea is behind prediction markets
that as this date approaches,
there will be better and better information.
And so the market will actually reflect reality,
maybe even more than any individual person's opinion.
That's right.
We might not be able to like see inside of Elon Musk's mind
to know how satisfied he is with his CEO,
but the wisdom of the crowds will sort of intuit his vibe.
That is the idea, yes, that's the pitch.
So prediction markets, what do you think?
Well, like I said, I think that there is clearly
some value here.
I think that a lot of this is innocuous fun.
And I think it's probably something
that we should continue to explore.
It seems like at this point,

we know that there is wisdom in crowds
that the sort of aggregated opinions
of a large group of people
are almost always gonna be better
than one person's opinion, right?
So let's go in that direction.
At the same time,
do I want a bunch of gamblers running the economy
or our politics?
Absolutely not.
Okay, well, I'm gonna bet against your success
on every prediction market I can.
Wow.
And that's mean, I won't do that.
Okay.
When we come back, we're gonna talk to a man
who's trying to make AI smell.
Here that?
That is the sound of a new era of work.
Listen.
Great, isn't it?
Because now with the HP Elite Dragonfly
with noise cancellation
and Intel Core i7 processor,
you can meet quietly, even when it's loud.
And you can hear the sound of the sound
of the sound of the sound of the sound
of the sound of the sound of the sound
of the sound of the sound of the sound
of the sound of the sound of the sound
that's loud.
Ah, the HP Elite Dragonfly with noise cancellation.
HP, visit hp.com slash work happy.
Well, Kevin, this next story stinks to hi, Kevin.
I see what you did there.
So this is gonna be a very interesting segment.
I'm very excited for this.
A couple of weeks ago,
I was reading one of my AI newsletters
and I came across this item
that I couldn't stop thinking about.
And it was all about how AI was being taught to smell.
Yeah, I read the same thing.

And I came to you and I said,
we have to talk about this.
Yes, so this is a project that has been
sort of incubated inside of Google
but was spun out into a separate company called Osmo.
You might say it was stincubated inside of Google.
Stop, all right.
I'm putting a moratorium on smell-related points
in wordplay.
Fair enough.
So back in August, researchers at Google
and this company Osmo put out a paper in Science
showing that their AI model was basically indistinguishable
for the average human at predicting odors.
You know, sometimes I can predict what you had for dinner
just using my sense of smell.
It would be interesting to compare that
with what the AI can do.
So they created something they're calling
the principal odor map.
Basically, they are training an AI
to be able to identify odors,
not by sort of building a replica of the human nose
but by sort of mapping the relationships
between different molecules and what they smell like.
And this apparently has all kinds of interesting applications,
everything from creating new fragrances and perfumes
to possibly even being able to like detect disease.
So today we're bringing on the CEO of Osmos,
Alex Wiltschow, to talk to us about their smelling AI
or smell-LM, if you...
Is this a smell-LM?
It's a smell-LM.
Hi, there.
Hello. Hi, Alex.
Hey, how's it going?
Good, how are you?
I'm doing great.
Well, first of all, you smell great.
Oh, thank you very much.
Well, the thing is, we haven't invented that yet.
We're on the road to that, so you shouldn't know that.
The voice memo is going.

As you could understand, I've got fancy candles
that I can stack in order to get the recorder
at the same height, roughly, as my microphone.
And would you mind saying what scents those candles are?
This is called Abdelkader.
So it doesn't give me like the notes of it.
And then this one, it's kind of basic, right?
It's the Santal candle, but I love it.
I think it's really, really great.
So this is like the LaLabo classic scent.
If you could refer to those by their molecular structures,
that would be more helpful for me.
So you didn't tell me I needed to be in the laboratory
to analyze them live and give you all the details
in the readings.
Now, what I did do is I got access permissions to our database
so that I can check how many molecules are more or less
fruitier cinnamon than anyone that we're going to try later.
So you can quiz me as I type in queries
across hundreds of millions of molecules
and kind of give you the answer of what our models say.
I'm ready to dig in.
So I was looking at your company's website
and I found a blog post that you wrote
where you talk about sort of your origin story
as someone who is interested in teaching computers to smell.
You talked about being obsessed with smell
from a very young age.
So when did your interest in scent start and why?
So I can't say why, because I was just born this way.
Some people have a really wide open window
to the visual world or to the auditory world.
And for whatever reason, my window for the olfactory world
has been very open.
You say like carton of milk or something like that.
I can close my eyes and imagine how it feels to hold it.
I can imagine how it smells, but I don't have any images at all.
So I guess I'm just wired this way.
Yeah, so you said that you were a teenage perfume
collector, which is very cool.
But you also had an experience you wrote about with your dad
when you were in graduate school that made
you want to pursue this path.

Yeah, so when I was 24, 25, my dad got sick
and ended up being brain cancer.
And I later learned after many years
having kind of processed his passing, which came about,
unfortunately, very quickly, that cancer has a smell.
And the more that I read about this,
the more I realized that many kinds of illnesses and ailments
and just wellness and health states of our body have a smell.
And if you look at the literature, the science,
if you read all these little anecdotes that are out there,
it's clear that we can detect so much more than just
that I put too much hot sauce on my eggs.
There's so much signal that's out there,
and we're just beginning to scratch the surface.
And if we're able to give that ability to computers beyond maybe
even what we can do as humans, but also what dogs and canines
and other animals can do, if we can give that ability
to computers so that this ability never rests
and it always improves and benefits
from the incredible ecosystem of computation,
people are gonna live healthier, happier, longer lives.
So that's the mission that I'm on.
Well, and humans are sort of famously
like not the best members of the animal kingdom
when it comes to being able to sniff things out, right?
We don't have the most developed sense of smell
relative to dogs or other animals.
And so if we could use AI to improve our perception of smells,
that could potentially be a very good thing
in all the ways that you're talking about.
I could finally track my prey through the forest
without having to resort to bringing a dog.
Kay, you can do it today.
So there's this really beautiful study, yes,
beautiful study that if you get down on all fours
and get to where the smells actually are,
which is on the ground, like we're bipedal,
we stand up very tall and we're far away from the good stuff.
All the good smells are on the ground.
So if you get down on the ground, you can track sense.
Now you're slower than a dog.
Dogs are amazing at this, but you can do it.
Wow.

So I mean, maybe next time we get together,
if we do this in person, I'll leave a little set trail
and we can each kind of try our hand at seeing
if we can track this out.
That sounds perfect.
Yeah, we now have an episode for next week.
Casey goes crawling through San Francisco
on all fours, identifying various sense.
So let's talk about this experiment that you all ran
as part of this research that was published in science.
You called it the odor-turing test,
and obviously that's a reference to the Turing test,
which is sort of the famous,
like can you tell if this thing is an AI
or not just based on chatting with it?
What is the odor-turing test that you set up
and how did it work?
So here's what we set it up.
We trained a panel of people
to reliably rate what molecules smell like.
And so the way that we did that is kind of like
being handed a crayola crayon box
and being told to memorize the words on the crayon
with the color of the crayon.
Turns out even for smell,
you can get pretty good at that
with like four, five, six hours of training.
So what we did is we trained this panel
and then we digitally sniffed hundreds of thousands
of molecules that were on a large database.
And so we predicted the smells of all these hundreds
of thousands, we kept our predictions secret,
and then we selected this group of 400,
sent them out to our panelists,
and they smelled them and rated them.
So that's how all really big AI systems are trained
is you collect lots of data from lots of people,
and when you need high quality data,
you average people or you have them adjudicate somehow.
So the best you can do is the average of the panel here.
And every person in the panel
has some distance to the panel mean.
Some panelists are closer to the panel mean,

some are further away.
And our model most of the time was closer
to the panel mean than the median panelist,
which is in my view, an early form
of passing the odor-turing test.
Do you think someday like you'll be able to make an app
that's like a Shazam for smell.
So if I'm walking through the world,
I'm like, hey, what is that exactly?
It'll just sort of be able to tell me?
100%.
I mean, that's, we know how to do that.
And it's something that we're working on
the fundamental technology to actually enable.
And then if we can take that readout
and then replay that smell,
maybe with the same molecules that we detected,
maybe with totally different ones.
And that means we've fully round-tripped to smell.
So those are all steps on a staircase
that are in front of us.
And we're starting to climb up them right now,
but that's what's ahead of us.
That's fascinating.
Well, it's a very interesting project
and I will be very interested to see what the next steps
in your research and development are.
But right now you have actually given us a quiz.
You've mailed us a kit that is similar to the ones
that the people who participated in your research got.
And Casey and I are ready to take the odor-turing test.
Are you ready, Casey?
Yeah, let's see if we can pass the smell test.
All right, so Alex, you have sent us a Osmo sniff test.
Casey, here's your copy.
This is a sheet of paper explaining what we're supposed
to do along with some samples of some of these odors.
So here's our little kit here.
So basically this is testing how our ability
to detect these smells is compared to the AI model
as well as to Osmo's master perfumer.
So we are going to, first of all, we have to reset our noses.
Have you ever reset your nose before?

I don't think I have.
Okay, so it says we have to smell our elbow pit,
our inner elbow.
This is a prank.
It very much feels like a prank.
Nope, that's a pro move.
I've worked with perfumers a lot
and been in a lot of smelling sessions
and people just smell their skin.
Wow.
Okay, so my nose has been reset.
Thank God I took a shower today.
Okay, so now we opened the vial labeled 427-3.
And we smell this and then we have to write down
at least three words to describe it.
Okay, so I'm going to open this up
and take a little whiff.
Okay, all right.
I am now also taking a whiff.
Now I have a bad sense of smell
so I'm not going to do well on this test, I'm afraid.
That's hard.
So I'm going to write down my words,
you write down your words.
Yeah, what were your words for the first one?
Okay, my words were grape, violets and purple
which is not actually a smell.
You have synesthesia.
I wrote down green apple, white wine, flowers.
Wow, we are so different.
Okay, so here's number two.
Okay.
Now this one is on a strip rather than a vial.
Yes.
Oh, I've had this cocktail, what is this?
Casey, what did you write down for number two?
I'm so wrong.
I've literally had that cocktail
and I just don't know what it is
but I wrote down lime, simple syrup, strawberry.
I'm just like groping around for like
what is the cocktail that I've had
that has whatever that is in it.

One of us is really bad at this
because I wrote down bourbon, wood and cayenne pepper.
Oh, interesting, number three.
Wait, reset your nose.
Reset nose.
Okay.
By the way, if you're listening,
feel free to reset your nose along with us at home.
Everybody, reset your nose.
You know what they call this?
It's time to reset your nose.
They call this an olfactory reset.
That is an olfactory reset, all right.
Here we go, this is a small vial
with some yellow stuff in it called labeled 400.
Okay, I'm getting some,
okay, I'm not gonna tell you what I'm getting at.
You have to come up with your words.
Don't prime me, bro.
Yeah, that was another,
I got another set of wrong answers for you on that one.
Okay, what did you guess?
I wrote down sandalwood, bergamot, pepper.
Okay, I wrote down meat and tomato sauce.
Okay, okay, so we have the last one.
This is number 41.
Oh, I can get this one.
Okay.
No, I can't.
This just smells like the first one.
Okay, so for this one, I got moss, mildew, and forest.
It's beautiful.
And the random tokens I've generated
would include fabric softener, lilacs, and the first one.
Okay, okay, so we have guessed our four.
Now we are gonna open the envelope containing the-
The envelope, please.
The correct answers.
Would you like to do the honors?
Yes, I will.
And these answers were actually prepared
by Pricewater's house, Cooper's.
And they've been kept in a lot of place case.

And the first set goes to-
The first one was-
Wait, this was the one that we guessed.
So remind me what you guessed for number one.
First one, I guess green apple, white wine, flowers.
You guessed-
And I guessed grape, violets, and purple.
Okay, the Osmo AI descriptors were fruit, pineapple, and sweet.
So I got close with grape.
That is a fruit.
Yep.
Yeah.
Okay, great.
Number two, I had lime, simple syrup, strawberry.
And I had bourbon, wood, and cayenne pepper.
Okay.
Osmo AI says floral, spicy, sweet, and green.
Green, interestingly, not a smell.
So how do you explain that, Alex?
Green is definitely a smell.
It's like fresh cut grass.
It's like all the planty type things.
Planty type things.
Okay, all right, interesting.
The master perfumers described it as floral muguette?
Do you know this word?
It's a little flower with like little bell type flowers.
It smells like dryer sheets.
Like dryer sheets are the smell of muguette now.
Yes, now that you say it,
number two was definitely giving dryer sheets.
So that resonates with me.
So other descriptors for that one include
anise, apple, and pear.
And I think it was the pear
that was making me think it was a cocktail so much.
Anise in like licorice cannot,
like that's often in cocktails.
What's interesting about our predictions
is anise actually wasn't one of the labels
that the model knew about.
So it did the next best thing, which is spicy, huh?
Interesting.

I was getting spicy, okay, that's good.
All right, number three,
I had sandalwood, bergamot, pepper.
And I had meat and tomato sauce.
Okay, I feel like we're at least in the right zone.
The Osmo AI described it as leathery, earthy, and tobacco.
And the master perfumers described it
as saffron, fruity, leather, black tea.
Wow.
So if we've gotten leather,
we would have really.
You were definitely in the ballpark there.
Now, my wife used to sell saffron.
And so she knows the saffron flour like very well.
And when she smelled it first, she's like,
holy crap, not only is it saffron,
it's the specific part of the flour.
Oh wow.
And this molecule is definitely not in the flour.
So it's like, it's a totally new molecule,
but with smells that exist elsewhere in the world.
It's just.
So they can make fake saffron now
that will only cost like $100
as opposed to $300 at the grocery store.
Well, for this molecule,
you'll bring along a little leather and tobacco,
which maybe doesn't, you know,
fit with your risotto or, you know,
the dishes you might want to use it in.
That's true.
That's true.
I hate when leather taste gets in my risotto.
Okay, what's number four?
Number four.
This is the one where I had moss, mildew, and forest.
And I famously had fabric, softener, lilacs,
and the first one.
And Osmo described it as woody, herbal, fresh, and mint.
And the master perfumers described it as woody,
patchouli, and sage.
So if we spend a little bit more time in the lower hate
with the grateful dead in the 60s,

maybe we would have gotten this one.
All right, so Alex, how did we do
compared to your average panelists in your study
and your AI model?
Well, actually, I think I can answer that, Kevin,
because we didn't get one right.
So I think that gives us a rough sense of how we did.
But yeah, Alex, anything to add.
I'm gonna, you know, step in
and you're gonna get very strong partial credit.
On number one, you got the fruit, right?
And some people do perceive 427.3
as having kind of like that grape or red berry
kind of a thing.
And then I think you're in the ballpark for 400, right?
You're giving like the kind of earthy aspect to it.
And then I think, Kevin, you get partial credit
for being in the woods for 41.
Yeah.
Yeah, Casey.
Well, congratulations on your partial credit, Kevin.
And this is the first time that y'all are doing this.
I mean, that's incredible.
It's like, this is not easy stuff, right?
And I can see the gears turning as well.
Like it actually is kind of like tardy.
Like you have to use your brain to pull the words
out of your mind as you smell.
Yeah, you know what this is really making me think of,
Alex, is Kevin and I need to spend more time stopping
and smelling the roses.
Because then maybe we do better at your quiz.
Yeah.
Well, and then ultimately we can train an AI
to smell the roses for us and put ourselves out of a job.
So. Exactly.
What kind of a job is it to stop and smell the flowers?
It's this slice of reality that now you get to enjoy.
Why would you outsource that?
Very few people have a job that is closer to stopping
and smelling the roses than the job you have, Alex.
I love it.
It's my favorite thing in the world.

All right, Alex Wiltschko, thank you so much.

Really, really appreciate you coming on.

And Alex, I've always wanted to say this to a guest.

Smell you later.

Smell you later.

Kevin, please, you thank so much.

When you were a kid, did you want to be an astronaut?

A crossing guard?

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You can email us, as always, at hardfork at nytimes.com.

But you can't smell us.

Not yet.

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