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Small Data

One August evening in 1996, a publisher named Nigel Newton left his office in London's Soho district and headed home, carrying a stack of papers. Among them were fifty sample pages from a book he needed to review, but Newton didn't have high hopes for it. The manuscript had already been rejected by eight other publishers.

Newton didn't read the sample pages that evening. Instead, he handed them over to his eight-year-old daughter, Alice.

Alice read them. About an hour later, she returned from her room, her face glowing with excitement. "Dad," she said, "this is so much better than anything else."

She wouldn't stop talking about the book. She wanted to finish reading it, and she pestered her father—for months—until he tracked down the rest. Eventually, spurred by his daughter's insistence, Newton signed the author to a modest contract and printed five hundred copies.

That book, which barely made it to the public, was *Harry Potter and the Philosopher's Stone*.*

You know the rest of the story. Today, there are hundreds of millions of *Harry Potter* books in print worldwide. How did publishers get it so wrong? Eight experts in children's publishing turned *Harry Potter* down—and the ninth, Newton, only printed five hundred copies. But Alice, an eight-year-old, knew right away that it was "so much better than anything else."

Alice didn't analyze *Harry Potter*'s potential. She didn't think about cover art, distribution, movie rights, or a theme park. She just reacted to what she read. Those grown-ups tried to predict what children would think, and they were wrong. Alice got it right because she actually was a kid. And her father was smart enough to listen.

When Nigel Newton showed Alice the *Harry Potter* manuscript, he got a glimpse into the future. He saw a target reader react to the book before he'd committed to printing a single copy. On Friday of your sprint, you and your team will experience that same kind of time warp. You'll watch target customers react to your new ideas—before you've made the expensive commitment to launch them.

Here's how Friday works: One person from your team acts as Interviewer. He'll interview five of your target customers, one at a time. He'll let each of them try to complete a task with the prototype and ask a few questions to understand what they're thinking as they interact with it. Meanwhile, in another room, the rest of the team will watch a video stream of the interview and make note of the customers' reactions.

*In the United States, the book was called *Harry Potter and the Sorcerer's Stone*, due to the fact that philosophers are super dorky.

The FitStar team watches customers use their prototype for the first time.

These interviews are an emotional roller coaster. When customers get confused by your prototype, you'll be frustrated. If they don't care about your new ideas, you'll be disappointed. But when they complete a difficult task, understand something you've been trying to explain for months, or if they pick your solution over the competition—you will be elated. After five interviews, the patterns will be easy to spot.

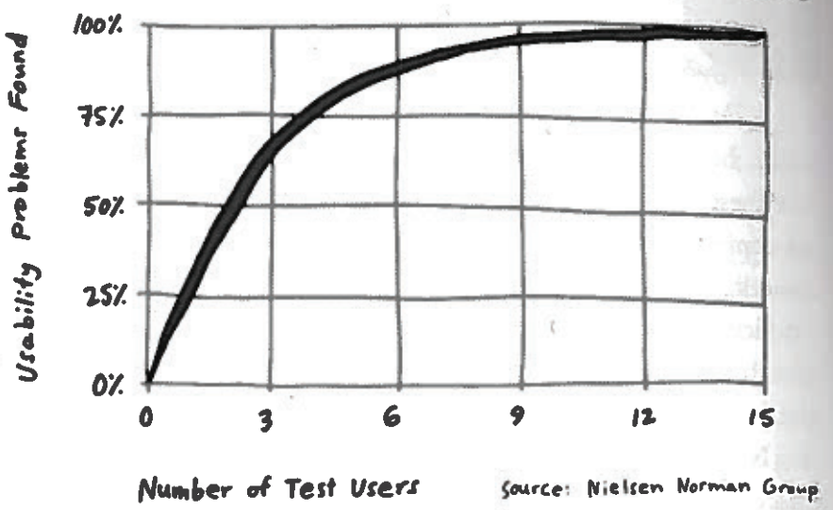
Now, we know that the idea of testing with such a small sample is unsettling to some folks. Is talking to just five customers worthwhile? Will the findings be meaningful?

Earlier in the week, you recruited and carefully selected participants for your test who match the profile of your target customer. Because you'll be talking to the right people, we're convinced you can trust what they say. And we're also convinced that you can learn plenty from just five of them.

Five is the magic number

Jakob Nielsen is a user research expert. Back in the 1990s, he pioneered the field of website usability (the study of how to design websites that make sense to people). Over the course of his career, Nielsen has overseen thousands of customer interviews, and at some point he wondered: How many interviews does it take to spot the most important patterns?

So Nielsen analyzed eighty-three of his own product studies.* He plotted how many problems were discovered after ten interviews, twenty interviews, and so on. The results were both consistent and surprising: 85 percent of the problems were observed after just five people.



Testing with more people didn't lead to many more insights—just a lot more work. "The number of findings quickly reaches the point of diminishing returns," Nielsen concluded. "There's little additional benefit to running more than five people through the same study; ROI drops like a stone." Instead of investing a great deal more time to find the last 15 percent, Nielsen realized he could just fix the 85 percent and test again.

We've seen the same phenomenon in our own tests. By the time we observe the fifth customer, we're just confirming patterns that showed up in the first four interviews. We tried testing with more customers, but as Nielsen says, it just wasn't worth it.

*Nielsen, Jakob, and Thomas K. Landauer, "A Mathematical Model of the Finding of Usability Problems," Proceedings of ACM INTERCHI'93 Conference (Amsterdam, 24–29 April 1993), pp. 206–13.

Remember the door frame in One Medical's prototype family clinic? After seeing two children nearly bounce out of their strollers as they rolled into the office, the problem was obvious. The team didn't need to gather a thousand data points before they fixed it. The same thing with crowding in the lobby and desks in the exam room. When two or three people out of five have the same strong reaction—positive or negative—you should pay attention.

The number five also happens to be very convenient. You can fit five one-hour interviews into a single day, with time for a short break between each one and a team debrief at the end:

9:00 a.m.	**Interview #1**
10:00	Break
10:30	**Interview #2**
11:30	Early lunch
12:30 p.m.	**Interview #3**
1:30	Break
2:00	**Interview #4**
3:00	Break
3:30	**Interview #5**
4:30	Debrief

This condensed schedule allows the whole team to watch the interviews together, and analyze them firsthand. This means no waiting for results, and no second-guessing the interpretation.

One-on-one interviews are a remarkable shortcut. They allow you to test a façade of your product, long before you've built the real thing—and fallen in love with it. They deliver meaningful results in a single day. But they also offer an important insight that's nearly impossible to get with large-scale quantitative data: *why* things work or don't work.

That "why" is critical. If you don't know why a product or service isn't working, it's hard to fix it. If One Medical had put desks in their fam-

ily exam rooms, parents would have been frustrated. But it would have been difficult to pinpoint the problem. By showing families a prototype clinic and interviewing them about the experience, One Medical found out the *why* behind the problem: Parents needed reassurance from the doctor, and even a tiny bit of distraction was too much. When all you have is statistics, you have to guess what your customers are thinking. When you're doing an interview, you can just . . . ask.

These interviews are easy to do. They don't require special expertise or equipment. You won't need a behavioral psychologist or a laser eye-tracker—just a friendly demeanor, a sense of curiosity, and a willingness to have your assumptions proven wrong. In the next chapter, we'll show you how to do it.

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Interview

Michael Margolis is an excellent conversationalist. He smiles easily and asks lots of questions, brimming with a natural curiosity about what it's like to live where you live, work where you work, and do whatever it is that you do. It's only afterward that you realize *you* were talking the whole time and learned little about him.

Michael's friendliness and curiosity are genuine, but his conversational skills aren't just a natural gift. Michael is a research partner at GV, and when you watch him interviewing customers—which we've seen him do hundreds of times—you realize it's a practiced art. Everything from the structure of his questions to his body language helps people think aloud and express themselves honestly.

For more than twenty-five years, Michael has conducted research for all kinds of companies—Electronic Arts, Alcoa, Sun Microsystems, Maytag, Unilever, Walmart.com, and Google. Since 2010, he's been at GV, working with the startups in our portfolio.

Over the years, Michael has adapted his research methods to be fast enough for startups, and learnable for the people who work there. Michael has trained product managers, engineers, designers, salespeople, and countless others in how to conduct these interviews. Anyone can do it—even a CEO.

In this chapter, we'll let you in on some of Michael's secrets. Back on Tuesday, you learned his shortcuts for recruiting the perfect target customers (see pages 119–123). In this chapter, you'll learn how to interview. These interviews can teach you about the people who use your product, reveal hidden problems with your solutions, *and* uncover the "why" behind it all.

No matter what kind of customer he's talking to, or what kind of prototype he's testing, Michael uses the same basic structure: the Five-Act Interview.

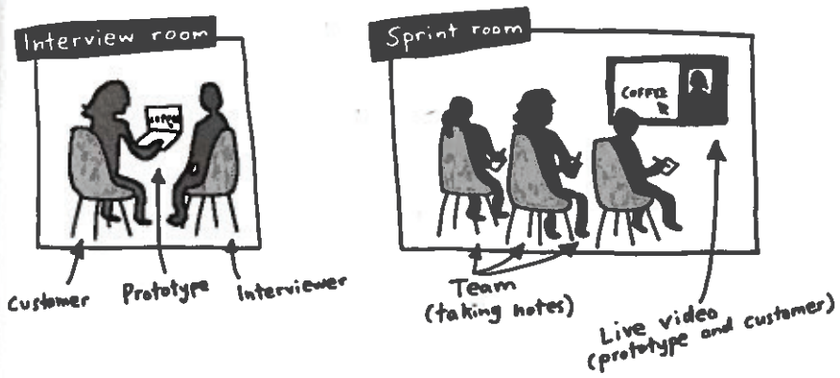
The Five-Act Interview

This structured conversation helps the customer get comfortable, establishes some background, and ensures that the entire prototype is reviewed. Here's how it goes:

1. **A friendly welcome** to start the interview
2. A series of general, open-ended **context questions** about the customer
3. **Introduction to the prototype(s)**
4. Detailed **tasks** to get the customer reacting to the prototype
5. **A quick debrief** to capture the customer's overarching thoughts and impressions

Friday's action takes place in two rooms. In the sprint room, the team watches the interviews over live video. (Nothing sneaky here. You'll get the customer's permission to record and play the video.) The

interview itself takes place in another, smaller room—which we cleverly call the "interview room."



There's no special tech setup required. We use a regular laptop with a webcam and simple video meeting software to share the video and audio. This arrangement works for websites, but it also works for mobile devices, robots, and other hardware—just point the webcams at what you want to see.

Michael Margolis conducting an interview. He sits beside the customer, but gives her plenty of space. A webcam streams video of the customer's reaction to the sprint room.

As complicated as it gets: When testing mobile apps or hardware devices, we use a document camera connected to a laptop. Video streams from the laptop to the sprint room.

Sometimes the Interviewer or the customer are in another building, another city, or out in the field (Michael has conducted interviews at hospitals, hotels, and truck stops), but since the sprint team is watching over video, that doesn't matter. What does matter is that the Interviewer and the customer are sitting side by side, talking comfortably. The interview is a not a group exercise; it's a conversation between two people. One person from your team can be the Interviewer for the entire day, or two people can alternate. (Since you're looking for big, obvious patterns, you don't have to worry about tainting the data with this kind of small change.)

Act 1: Friendly welcome

People need to feel comfortable to be open, honest, and critical. So the first job of the Interviewer is to welcome the customer and put her at ease. That means a warm greeting and friendly small talk about the weather. It also means smiling a lot. (If you're not in the mood to smile, prepare for the interview by listening to "Keep A-Knockin'" by Little Richard.)

Once the customer is comfortably seated in the interview room, the Interviewer should say something like:

> "Thanks for coming in today! We're always trying to improve our product, and getting your honest feedback is a really important part of that.
> "This interview will be pretty informal. I'll ask a lot of questions, but I'm not testing you—I'm actually testing this product. If you get stuck or confused, it's not your fault. In fact, it helps us find problems we need to fix.
> "I'll start by asking some background questions, then I'll show you some things we're working on. Do you have any questions before we begin?"

The Interviewer should also ask the customer if it's okay to record and watch the video of the interview, and he or she should make sure the customer signs any legal paperwork insisted on by your lawyers. (We use a simple one-page form for nondisclosure, permission to record, and invention assignment. These forms can also be signed electronically before the interview.)

Act 2: Context questions

After the introduction, you'll be eager to bring out the prototype. Not so fast. Instead, start slow by asking some questions about the customer's life, interests, and activities. These questions help build rapport, but they also give you context for understanding and interpreting your customer's reactions and responses.

A great series of context questions starts with small talk and transitions into personal questions relevant to the sprint. If you do it right, customers won't realize the interview has started. It will feel just like natural conversation.

In our sprint with FitStar, we knew it would be helpful to understand more about each customer's approach to exercise. Michael's context questions went something like this:

"What kind of work do you do?"
"For how long have you been doing that?"
"What do you do when you're not working?"
"What do you do to take care of yourself? To stay in shape? To stay active?"
"Have you used any apps or websites or other things to help with fitness? Which ones?"
"What did you want them to do for you? What do you like or dislike about them? Did you pay for them? Why? Why not?"

As you can see, Michael started with generic small talk ("What kind of work do you do?") then steered the topic to fitness ("What do you do to take care of yourself?"). As he asked each open-ended question, he encouraged answers with smiles, nods, and eye contact.

At minimum, these context questions make the customer more comfortable and forthcoming. But quite often, the answers help you understand how your product or service fits into the customer's life—and perhaps, what people think about your competition. In the FitStar interviews, we learned about customers' experience with workout videos and personal trainers, and how they exercised when they traveled—all useful information.

Act 3: Introduce the prototype(s)

Now you're ready to get the customer started on the prototype. Michael begins by saying:

"Would you be willing to look at some prototypes?"

By asking for permission, he reinforces the status relationship: The customer is doing *him* a favor, not the other way around, and it is the prototype that will be tested, not the customer. It's also important to say:

"Some things may not work quite right yet—if you run into something that's not working, I'll let you know."

Of course, if you built a "Goldilocks quality" prototype on Thursday, the customer will forget it isn't real once they start using it. However, introducing it this way encourages them to give blunt feedback. Explaining that it's a prototype also makes the Interviewer's job easier in case something breaks or the customer encounters a dead end (both of which are likely to happen).

Remind the customer that you're testing the prototype—not her:

"There are no right or wrong answers. Since I didn't design this, you won't hurt my feelings or flatter me. In fact, frank, candid feedback is the most helpful."

That "I didn't design this" line is important, because it's easier for customers to be honest if they don't think the Interviewer is emotionally invested in the ideas. Hopefully the Interviewer avoided working on the prototype on Thursday—but he should probably say "I didn't design this" even if he actually did. Don't worry, we won't tell on you.

The Interviewer should also remind the customer to think aloud:

"As we go, please think aloud. Tell me what you're trying to do and how you think you can do it. If you get confused or don't understand something, please tell me. If you see things you like, tell me that, too."

Thinking aloud makes the interview format especially powerful. Seeing where customers struggle and where they succeed with your prototype is useful—but hearing their thoughts as they go is invaluable.

Act 4: Tasks and nudges

In the real world, your product will stand alone—people will find it, evaluate it, and use it without you there to guide them. Asking target customers to do realistic tasks during an interview is the best way to simulate that real-world experience.

Good task instructions are like clues for a treasure hunt—it's no fun (and not useful) if you're told where to go and what to do. You want to watch customers figure out the prototype on their own. As an example, here's the task from the FitStar test:

> "Let's say you came across FitStar in the App Store. How would you decide if you wanted to try it?"

Starting from this simple nudge, the customer reads and evaluates the app description, installs the app, and tries it out. The "how would you decide?" phrasing encourages her to act naturally along the way.

We learned much more from this simple task than we would have if Michael had micromanaged her at every step. ("Install the app. Now sign up. Now fill in your name.") Open-ended tasks lead to interesting interviews. Overly specific tasks are boring for both the customer and the sprint team.

As the customer goes through the task, the Interviewer should ask questions to help her think aloud:

> "What is this? What is it for?"
> "What do you think of that?"
> "What do you expect that will do?"

> "So, what goes through your mind as you look at this?"
> "What are you looking for?"
> "What would you do next? Why?"

These questions should be easy to answer and not intimidating. The Interviewer tries to keep the customer moving and thinking aloud, not anxious to find the right answer.

Act 5: Quick debrief

To wrap up the interview, ask a few debrief questions. You'll see and hear a lot during each interview, and it can be tough to pick out the most important reactions, successes, and failures. When you ask debrief questions, your customers can help you sift through everything you heard.

Here are some of Michael's debrief questions:

> "How does this product compare to what you do now?"
> "What did you like about this product? What did you dislike?"
> "How would you describe this product to a friend?"
> "If you had three magic wishes to improve this product, what would they be?"

Don't worry—asking the "magic wishes" question doesn't mean you're turning your product planning over to your customers. Instead, it helps customers articulate their reactions. It will still be up to you to decide how to interpret and apply what you learn.

If you're testing two or more prototypes in your interviews, review each one (to refresh the customer's memory) and ask these questions:

"How would you compare those different products? What are the pros and cons?"

"Which parts of each would you combine to create a new, better version?"

"Which one worked better for you? Why?"

And that's it. When the interview is over, the Interviewer thanks the customer, gives her a gift card, and shows her out.

Throughout the session, the Interviewer should remain engaged in the conversation. He should encourage the customer to talk while remaining neutral (say things like "uh-huh" and "mmm hmm," not "great!" and "good job!") There's no need to take notes. The rest of the team in the sprint room will take care of that for you.

Of course, we don't expect anyone to memorize every question and all five acts. On Thursday, the Interviewer can start early by writing up a script while the rest of the team is prototyping. On Friday, he can make a printout to refer to as the interview goes along. Not only will the script make the interviews easier to run, it will also make them consistent—which makes it easier to spot patterns throughout the day.

One of our favorite stories about the power of interviews comes from our friend, a designer named Joe Gebbia. Back in 2008, Joe and a couple of friends founded a startup. They had what they thought was an amazing idea for a new online marketplace. They built and launched a website, then spent months improving it until they were pretty sure it was perfect.

But despite their efforts, the new service wasn't catching on. They had a few customers and a little revenue, but they weren't growing, and—bringing in just $200 a week—they weren't even making enough to pay the rent. Hoping they could turn the business around before running out of money, the founders took a somewhat desperate measure. They stopped their engineering work, left the office, and tracked down a handful of their customers. Then they interviewed them. One at a time, face-to-face, they watched people use their website.

Joe describes those interviews as "agonizing and enlightening." He recalls, "We were, like, smacking our heads." Their website was riddled with flaws. Even simple issues—such as picking a date on a calendar—confused people.

When they returned to the office, Joe and his cofounders spent a week fixing the most glaring problems, and then released a new version to their customers. Revenue doubled to $400 a week, and Joe checked to make sure it wasn't a bug in their accounting system. But the numbers were real. So they did another round of interviews, and another round of improvements. Revenue doubled again to $800, then $1,600, then $3,200 a week. That growth didn't stop.

That startup was Airbnb. Today, the online hospitality marketplace operates in more than 30,000 cities and 190 countries. They've served more than 35 million guests. It turns out it *was* an amazing idea, but to make it work, they had to do those interviews. "There's this gap between the vision and the customer," Joe says. "To make the two fit, you have to talk to people."

Airbnb's interviews showed the founders how the product looked through their customers' eyes, revealing problems the founders themselves couldn't see. Listening to customers didn't mean abandoning their vision. Instead, it gave them the knowledge they needed to combine with that vision, so they could close the gap and make a product that worked for real people.

We can't promise that your interviews will make you as successful as Airbnb, but we can promise that the process will be enlightening. In the next chapter, we'll talk about how to make sense of what you observe: taking notes, finding patterns, and drawing conclusions about next steps.

INTERVIEWER TIPS

With a Five-Act script, your interviews are sure to be effective. However, there are a few more techniques Michael uses to make them even better.

1. Be a good host

For just a moment, imagine you are the target customer who comes in for an interview. You've shown up to try some new product (you're not quite sure what) in a building you've never been to before, and you'll be watched by some person you just met. This encounter might have seemed like a good idea a couple of hours ago, but now you're not so sure.

The Interviewer is the host, and the customer is the guest. Michael makes sure the customer is comfortable before the interview begins. He smiles a lot. He's mindful of his body language. He munches on mints so his breath will be fresh. And he always starts with questions designed to put the customer at ease.

2. Ask open-ended questions

To understand what the customer thinks, you have to be careful not to ask leading questions. Some leading questions are obvious and easy to avoid (we're sure you won't say "You like this, right?"). But sometimes, you'll ask a leading question without meaning to do so.

Let's say you're interviewing a customer who's looking at your website—you want to know what the customer thinks,

and whether she would be likely to sign up for a demo of your product.

Interviewer: "Now that you've seen the site, would you be ready to sign up now, or do you need more information?"
Customer: "Um, I guess I'd need more info . . . Oh, here's the FAQ. I'll check it out."

This exchange looks okay at a glance, but the multiple-choice question ("ready to sign up" versus "need more information") has influenced the customer's response. You're assuming that the customer wants to do one of those two options. It's tough to do, but you should avoid asking multiple-choice questions. They're almost always leading questions in disguise.

Now, consider what would happen if you ask an open-ended question instead.

Interviewer: "Now that you've seen the site, what are you thinking?"
Customer: "I dunno, I mean . . . I don't think it's right for my company."
Interviewer: "Why is that?"
Customer: (Insert fascinating reason here.)

We just made this scenario up, but it's something we've seen play out dozens of times. When you ask an open-ended question, you're more likely to get an honest reaction and an explanation of why.

All of this may sound a little complicated, but Michael's advice to avoid leading questions comes down to just two rules:

DON'T ask multiple choice or "yes/no" questions.
("Would you . . . ?" "Do you . . ?" "Is it . . . ?")

DO ask "Five Ws and One H" questions.
("Who . . . ?" "What . . . ?" "Where . . . ?"
"When . . . ?" "Why . . . ?" "How . . . ?")

As with everything, asking questions like these gets easier with practice. One simple trick for the Interviewer: Write some sample "Five Ws" questions right into the script.

3. Ask broken questions

Michael Margolis is the master of broken questions. The idea behind a broken question is to start asking a question—but let your speech trail off before you say anything that could bias or influence the answer.

Customer: "Hmm!"
Michael: "So, what . . . is . . ." (Trails off into silence.)
Customer: "Well, I was just surprised to see that the prices were so high."

Michael got an honest, useful response out of the customer without even asking a real question. And because the question was so vague, she didn't feel pressure to tell Michael what she thought he wanted to hear.

In a situation like the example above, where the customer is reacting to something but not saying what, it's tempting to ask a leading question like "Were you looking at the pricing there?" With a broken question, you can encourage people to think aloud, without leading them in any direction.

You can also learn a lot by just remaining quiet. Don't always feel compelled to fill the silence with conversation. Stop and watch and wait and listen.

4. Curiosity mindset

Our final bit of advice on how to be a great Interviewer is not a technique, but a state of mind. On Thursday, the team has to be in a prototype mindset. On Friday, the team, and especially the Interviewer, should work hard at adopting a curiosity mindset.

Being in a curiosity mindset means being fascinated by your customers and their reactions. You can develop this mindset by focusing on the surprising details of what your customers say and do. Always ask "why?" Never assume or jump to conclusions. Before each interview, anticipate how interesting the information will be that you'll learn from the customer. Use your own body language to make yourself friendlier and more receptive: smile, lean in, and don't cross your arms. Curiosity is an outlook that can be embodied, and even learned.

If you'd like to learn more about customer interviews (and see a video of Michael conducting an interview), check out thesprintbook.com.